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JUNE '41

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by Ross Rocklynne

JUNE·1941

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Illustrations by R. Isip and Schneeman.

COVER BY ROGERS

All stories in this magazine are fiction. No actual persons are designated either by name or character. Any similarity is coincidental.

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INTERPRETERS MAY STILL BE NEEDED

SINCE telepathy is the language of mind speaking to mind, it seems clear enough that there will be no more of the stumbling blocks of language to trip us when telepathy is fully practicable. But, given a true ability to use telepathy, the fact that some call it "dog," some "perro," some say it's "ein hund," and others call it "un chien" will make little difference. Then, all minds can meet—

Maybe. Oh, true enough, English, Spanish, German and French will get along right enough. But how about someone who doesn't speak, and hasn't learned to think in the terms of, an Indo-European language? How about a Martian or Tregonsee the Rigellian?

Obviously, there's no similarity whatever between the sentences "The nut fits the bolt well." and "He is in good health." No, in the thought-terms of an Indo-European language, there isn't. But, in order to function, a language has to divide up the whole of nature into labeled compartments, and then interact those labels in forming concepts. Suppose we divided things up a little differently.

Just for practice and experiment, let's invent the term "nam," and mean by it the concept of a man, his personality, his economic, physical and mental being all together. By "env" we'll refer to his environment in an equally broad sense. Now if our whole basic training, from childhood on, had been on the background of such a language, such a divisioning of the universe, it would be clear that a man who was sick could be described as a "nam" who did not fit his "env" in one respect. They were in conflict, and he was distressed proportionately. A further descriptive term might be added as "phys-env," meaning physical aspect of his "env"; hence physical illness. "Menenv" being mental environment, a "nam" who didn't fit would be what we call insane—and, probably, a much more sensible way of describing the phenomenon.

A bolt that fits its nut has a great deal in common, fundamentally, with a healthy man—a "nam" who fits his "env."

But that is, of course, an exceedingly mild sample of what a different race could do by way of using different basic concepts. "Rock" and "Iron" and similar concrete objects telepathy could handle all right, probably. But do you "accept the invitation to the reception tendered by this planet to the visitors from the other world," or do you "ubglub the vegla of the people to the exwhatsit," wherein "ubglub" refers to the legendary hero Ubgloo, and the equally legendary joy with which he once agreed to attend a reunion of his fifteen wives—and so on? Most of our words have background references that we know so well we tend to overlook them.

No, telepathy or not, translators are still going to be necessary—and here's betting that if we ever do make contact with another intelligent race, getting into true, understanding contact is apt to be preceded by one of those grimly funny cases of misunderstanding classically described as "more fun, and more people killed—"

THE EDITOR.

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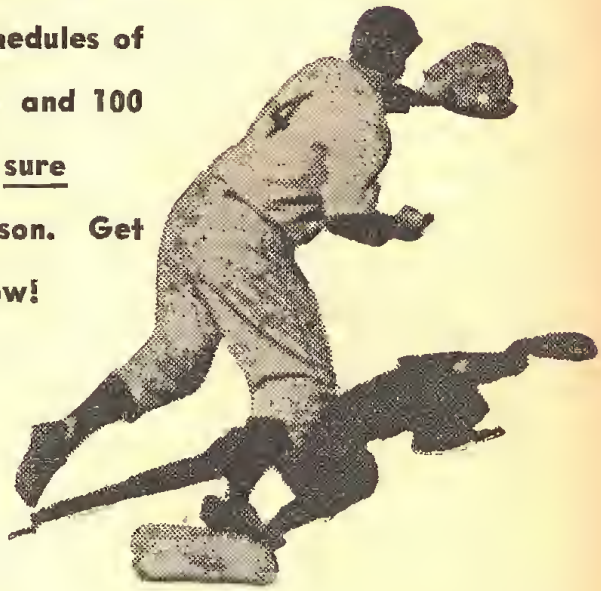

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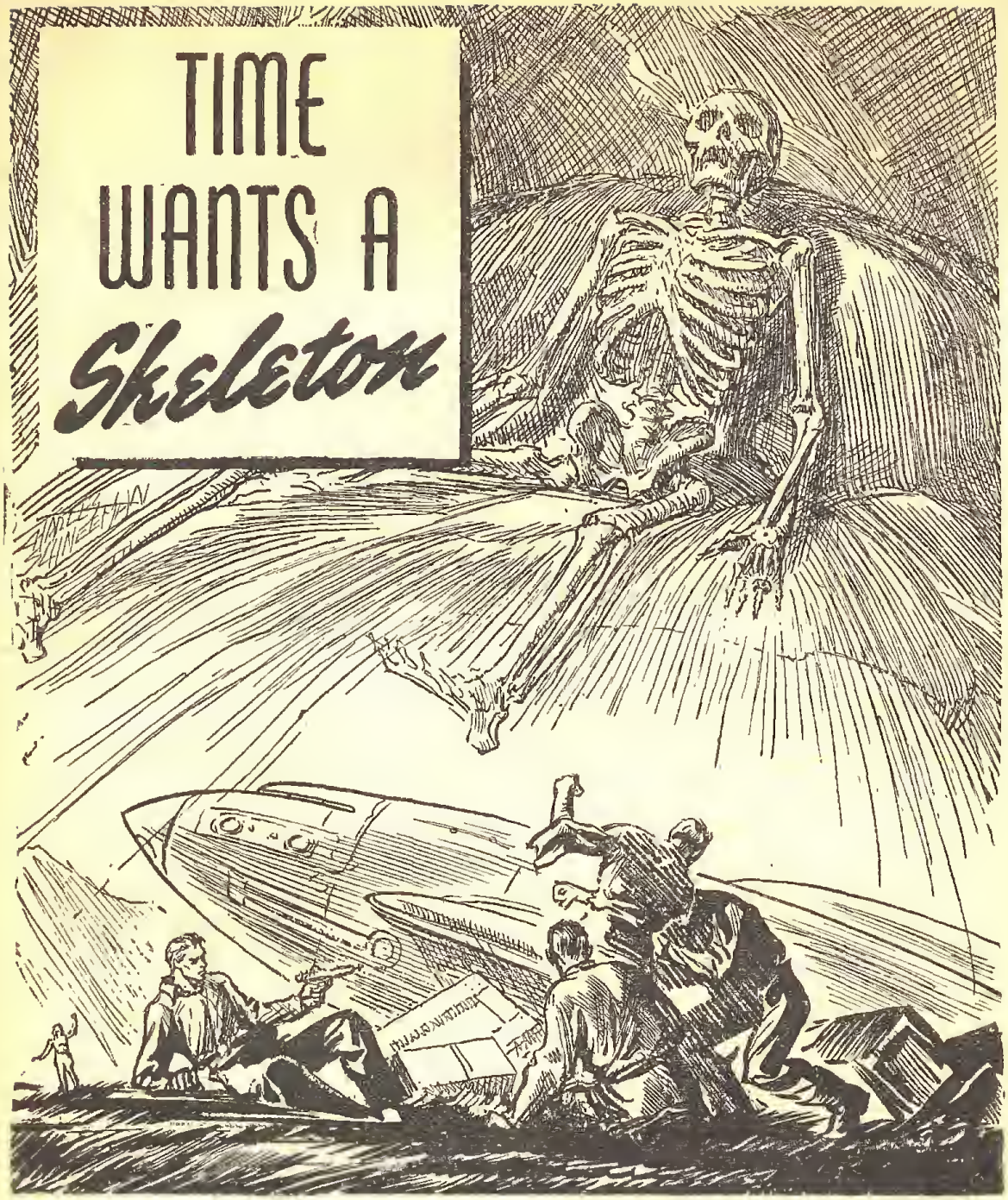


TIME WANTS A *Skeleton*

By Ross Rocklynne

Six people thrown back in Time knew that one of them had to supply a skeleton to lie a million years on an asteroid—

Illustrated by Schneeman

ASTEROID No. 1007 came spinning relentlessly up.

Lieutenant Tony Crow's eyes bulged. He released the choked U-bar frantically, and pounded on the auxiliary underjet controls. Up

went the nose of the ship, and stars, weirdly splashed across the heavens, showed briefly.

Then the ship fell, hurling itself against the base of the mountain. Tony was thrown from the control chair. He smacked against the wall, grinning twistedly. He pushed against it with a heavily shod foot as the ship teetered over, rolled a bit, and then was still—still, save for the hiss of escaping air.

He dived for a locker, broke out a pressure suit, perspiration pearling his forehead. He was into the suit, buckling the helmet down, before the last of the air escaped. He stood there, pained dismay in his eyes. His roving glance rested on the wall calendar.

"Happy December!" he snarled.

Then he remembered. Johnny Braker was out there, with his two fellow outlaws. By now, they'd be running this way. All the more reason why Tony should capture them now. He'd need their ship.

He acted quickly, buckling on his helmet, working over the air lock. He expelled his breath in relief as it opened. Nerves humming, he went through, came to his feet, inclosed by the bleak soundlessness of a twenty-mile planetoid more than a hundred million miles removed from Earth.

To his left the mountain rose sharply. Good. Tony had wanted to put the ship down there anyway. He took one reluctant look at the ship. His face fell mournfully. The stern section was caved in and twisted so much it looked ridiculous. Well, that was *that*.

He quickly drew his Hampton and moved soundlessly around the mountain's shoulder. He fell into a crouch as he saw the gleam of the outlaw ship, three hundred yards distant across a plain, hovering in the shadow thrown by an overhanging ledge.

Then he saw the three figures leaping toward him across the plain. His Hampton came viciously up. There was a puff of rock to the front left of the little group. They froze.

Tony left his place of concealment, snapping his headset on.

"Stay where you are!" he bawled.

The reaction was unexpected. Braker's voice came blasting back.

"The hell you say!"

A tiny crater came miraculously into being to Tony's left. He swore, jumped behind his protection, came out a second later to send another projectile winging its way. One of the figures pitched forward, to move no more, the balloon rotundity of its suit suddenly lost. The other two turned tail, only to halt and hole up behind a boulder gracing the middle of the plain. They proceeded to pepper Tony's retreat.

TONY SHRANK back against the mountainside, exasperated beyond measure. His glance, roving around, came to rest on a cave, a fault in the mountain that tapered out a hundred feet up.

He stared at the floor of the cave unbelievingly.

"I'll be double-damned," he muttered.

What he saw was a human skeleton.

He paled. His stomach suddenly heaved. Outrageous, haunting thoughts flicked through his consciousness. The skeleton was—horror!

And it had existed in the dim, unutterably distant past, before the asteroids, before the human race had come into existence!

The thoughts were gone, abruptly. Consciousness shuddered back. For a while, his face pasty white, his fin-

gers trembling, he thought he was going to be sick. But he wasn't. He stood there, staring. Memories! If he knew where they came from—His very mind revolted suddenly from probing deeper into a mystery that tore at the very roots of his sanity!

"It existed before the human race," he whispered. "Then where did the skeleton come from?"

His lips curled. Illusion! Conquering his maddening revulsion, he approached the skeleton, knelt near it. It lay inside the cave. Colorless starlight did not allow him to see it as well as he might. Yet, he saw the gleam of gold on the long, tapering finger. Old yellow gold, untarnished by atmosphere; and inset with an emerald, with a flaw, a distinctive, ovular air bubble, showing through its murky transparency.

He moved backward, away from it, face set stubbornly. "Illusion," he repeated.

Chips of rock, flaked off the mountainside by the exploding bullets of a Hampton, completed the transformation. He risked stepping out, fired.

The shot struck the boulder, split it down the middle. The two halves parted. The outlaws ran, firing back to cover their hasty retreat. Tony waited until the fire lessened, then stepped out and sent a shot over their heads.

Sudden dismay showed in his eyes. The ledge overhanging the outlaw ship cracked—where the bullet had struck it.

"What the hell—" came Braker's gasp. The two outlaws stopped stock-still.

The ledge came down, its ponderousness doubled by the absence of sound. Tony stumbled panting across the plain as the scene turned into a churning hell. The ship crumbled like clay. Another section of the ledge descended to bury the ship inextricably under a small mountain.

Tony Crow swore blisteringly. But ship or no ship, he still had a job to do. When the outlaws finally turned, they were looking into the menacing barrel of his Hampton.

"Get 'em up," he said impassively.

With studied insolence, Harry Jawbone Yates, the smaller of the two, raised his hands. A contemptuous sneer merely played over Braker's unshaved face and went upward to his smoky eyes.

"Why should I put my hands up? We're all pals, now—theoretically." His natural hate for any form of the law showed in his eyes. "You sure pulled a prize play, copper. Chase us clear across space, and end up getting us in a jam it's a hundred-to-one shot we'll get out of."

Tony held them transfixed with the Hampton, knowing what Braker meant. No ship would have reason to stop off on the twenty-mile mote in the sky that was Asteroid 1007.

He sighed, made a gesture. "Hamptons over here, boys. And be careful." The weapons arced groundward. "Sorry. I was intending to use your ship to take us back. I won't make another error like that one, though. Giving up this early in the game, for instance. Come here, Jawbone."

Yates shrugged. He was blond, had pale, wide-set eyes. By nature, he was conscienceless. A broken jawbone, protruding at a sharp angle from his jawline, gave him his nickname.

He held out his wrists. "Put 'em on." His voice was an effortless affair which did not go as low as it could; rather womanish, therefore. Braker was different. Strength,

nerve, and audacity showed in every line of his heavy, compact body. If there was one thing that characterized him it was his violent desire to live. These were men with elastic codes of ethics. A few of their more unscrupulous activities had caught up with them.

Tony put cuffs over Yates' wrist.

"Now you, Braker."

"Damned if I do," said Braker.

"Damned if you don't," said Tony. He waggled the Hampton, his normally genial eyes hardening slightly. "I mean it, Braker," he said slowly.

Braker sneered and tossed his head. Then, as if resistance was below his present mood, he submitted.

He watched the cuffs click silently. "There isn't a hundred-to-one chance, anyway," he growled.

Tony jerked slightly, his eyes turned skyward. He chuckled.

"Well, what's so funny?" Braker demanded.

"What you just said." Tony pointed. "The hundred-to-one shot —there she is!"

Braker turned.

"Yeah," he said. "Yeah. Damnation!"

A ship, glowing faintly in the starlight, hung above an escarpment that dropped to the valley floor. It had no visible support, and, indeed, there was no trace of the usual jets.

"Well, that's an item!" Yates muttered.

"It is at that," Tony agreed.

The ship moved. Rather, it simply disappeared, and next showed up a hundred feet away on the valley floor. A valve in the side of the cylindrical affair opened and a figure dropped out, stood looking at them.

A metallic voice said, "Are you the inhabitants or just people?"

The voice was agreeably flippant, and more agreeably feminine. Tony's senses quickened.

"We're people," he explained. "See?" He flapped his arms like wings. He grinned. "However, before you showed up, we had made up our minds to be—inhabitants."

"Oh. Stranded." The voice was slightly chilly. "Well, that's too bad. Come on inside. We'll talk the whole thing over. Say, are those handcuffs?"

"Right."

"Hm-m-m. Two outlaws—and a copper. Well, come on inside and meet the rest of us."

AN HOUR later, Tony, agreeably relaxed in a small lounge, was smoking his third cigarette, pressure suit off. Across the room was Braker and Yates. The girl, whose name, it developed, was Laurette, leaned against the door jamb, clad in jodhpurs and white silk blouse. She was blond and had clear, deep-blue eyes. Her lips were pursed a little and she looked angry. Tony couldn't keep his eyes off her.

Another man stood beside her. He was dark in complexion and looked as if he had a short temper. He was snapping the fingernails of two hands in a manner that showed characteristic impatience and nervousness. His name was Erle Masters.

An older man came into the room, fitting glasses over his eyes. He took a quick look around the room. Tony came to his feet.

Laurette said tonelessly, "Lieutenant, this is my father. Daddy, Lieutenant Tony Crow of the IPF. Those two are the outlaws I was telling you about."

"Outlaws, eh?" said Professor Overland. His voice seemed deep enough to count the separate vibrations. He rubbed at a stubbled jaw. "Well, that's too bad. Just when

we had the DeTosque strata 1007 fitting onto 70. And there were ample signs to show a definite dovetailing of apex 1007 into Morrell's fourth crater on Ceres, which would have put 1007 near the surface, if not on it. If we could have followed those up without an interruption—"

"Don't let this interrupt you," Masters broke in. His nails clicked. "We'll let these three sleep in the lounge. We can finish up the set of indications we're working on now, and then get rid of them."

Overland shook his graying head doubtfully. "It would be unthinkable to subject those two to cuffs for a full month."

Masters said irritably, "We'll give them a parole. Give them their temporary freedom if they agree to submit to handcuffs again when we land on Mars."

Tony laughed softly. "Sorry. You can't trust those two for five minutes, let alone a month." He paused. "Under the circumstances, professor, I guess you realize I've got full power to enforce my request that you take us back to Mars. The primary concern of the government in a case like this would be placing these two in custody. I suggest if we get under way now, you can devote more time to your project."

Overland said helplessly, "Of course. But it cuts off my chances of getting to the Christmas banquet at the university." Disappointment showed in his weak eyes. "There's a good chance they'll give me Amos, I guess, but it's already December third. Well, anyway, we'll miss the snow."

Laurette Overland said bitterly, "I wish we hadn't landed on 1007. You'd have got along without us then, all right."

Tony held her eyes gravely. "Perfectly, Miss Overland. Except that we would have been inhabitants. And, shortly, very, very dead ones."

"So?" She glared.

Erle Masters grabbed the girl's arm with a muttered word and led her out of the room.

OVERLAND grasped Tony's arm in a friendly squeeze, eyes twinkling. "Don't mind them, son. If you or your charges need anything, you can use my cabin. But we'll make Mars in forty-eight hours, seven or eight of it skimming through the Belt."

Tony shook his head dazedly. "Forty-eight hours?"

Overland grinned. His teeth were slightly tobacco-stained. "That's it. This is one of the new ships—the H-H drive. They zip along."

"Oh! The Fitz-Gerald Contraction?"

Overland nodded absently and left. Tony stared after him. He was remembering something now—the skeleton.

Braker said indulgently, "What a laugh."

Tony turned.

"What," he asked patiently, "is a laugh?"

Braker thrust out long, heavy legs. He was playing idly with a gold ring on the third finger of his right hand.

"Oh," he said carelessly, "a theory goes the rounds the asteroids used to be a planet. They're not sure the theory is right, so they send a few bearded long faces out to trace down faults and strata and striations on one asteroid and link them up with others. The girl's old man was just about to nail down 1007 and 70 and Ceres. Good for him. But what the hell! They prove the theory and the asteroids still play ring around the rosy and what have they got for their money?"

He absently played with his ring.

Tony as absently watched him

turning it round and round on his finger. Something peculiar about— He jumped. His eyes bulged.

That ring! He leaped to his feet, away from it.

Brakes and Yates looked at him strangely.

Braker came to his feet, brows contracting. "Say, copper, what ails you? You gone crazy? You look like a ghost."

Tony's heart began a fast, insistent pounding. Blood drummed against his temples. So he looked like a ghost? He laughed hoarsely. Was it imagination that suddenly stripped the flesh from Braker's head and left nothing but—a skull?

"I'm not a ghost," he chattered senselessly, still staring at the ring.

He closed his eyes tight, clenched his fists.

"He's gone bats?" said Yates, incredulously.

"Bats! Absolutely bats!"

Tony opened his eyes, looked carefully at Braker, at Yates, at the tapestried walls of the lounge. Slowly, the tensity left him. Now, no matter what developed he would have to keep a hold on himself.

"I'm all right, Braker. Let me see that ring." His voice was low, controlled, ominous.

"You take a fit?" Braker snapped suspiciously.

"I'm all right." Tony deliberately took Braker's cuffed hands into his own, looked at the gold band inset with the flawed emerald. Revulsion crawled in his stomach, yet he kept his eyes on the ring.

"Where'd you get the ring, Braker?" He kept his glance down.

"Why—'29, I think it was; or '28." Braker's tone was suddenly angry, resentful. He drew away. "What is this, anyway? I got it legal, and so what?"

"What I really wanted to know," said Tony, "was if there was another ring like this one—ever. I hope not . . . I don't know if I do. Damn it!"

"And I don't know what you're talking about," snarled Braker. "I still think you're bats. Hell, flawed emeralds are like fingerprints, never two alike. You know that yourself."

Tony slowly nodded and stepped back. Then he lighted a cigarette, and let the smoke inclose him.

"You fellows stay here," he said, and backed out and bolted the door behind him. He went heavily down the corridor, down a short flight of stairs, then down another short corridor.

He chose one of two doors, jerked it open. A half dozen packages slid from the shelves of what was evidently a closet. Then the other door opened. Tony staggered backward, losing his balance under the flood of packages. He bumped into Laurette Overland. She gasped and started to fall. Tony managed to twist around in time to grab her. They both fell anyway. Tony drew her to him on impulse and kissed her.

She twisted away from him, her face scarlet. Her palm came around, smashed into his face with all her considerable strength. She jumped to her feet, then the fury in her eyes died. Tony came erect, smarting under the blow.

"Sportsmanlike," he snapped angrily.

"You've got a lot of nerve," she said unsteadily. Her eyes went past him. "You clumsy fool. Help me get these packages back on the shelves before daddy or Erle come along. They're Christmas presents, and if you broke any of the wrappings— Come on, can't you help?"

TONY slowly hoisted a large carton labeled with a "Do Not Open

Before Christmas" sticker, and shoved it onto the lower rickety shelf, where it stuck out, practically ready to fall again. She put the smaller packages on top to balance it.

She turned, seeming to meet his eyes with difficulty.

Finally she got out, "I'm sorry I hit you like that, lieutenant. I guess it was natural—your kissing me I mean." She smiled faintly at Tony, who was ruefully rubbing his cheek. Then her composure abruptly returned. She straightened.

"If you're looking for the door to the control room, that's it."

"I wanted to see your father," Tony explained.

"You can't see him now. He's plotting our course. In fifteen minutes—" She let the sentence dangle. "Erle Masters can help you in a few minutes. He's edging the ship out of the way of a polyhedron."

"Polyhedron?"

"Many-sided asteroid. That's the way we designate them." She was being patronizing now.

"Well, of course. But I stick to plain triangles and spheres and cubes. A polyhedron is a sphere to me. I didn't know we were on the way. Since when? I didn't feel the acceleration."

"Since ten minutes ago. And naturally there wouldn't be any acceleration with an H-H drive. Well, if you want anything, you can talk to Erle." She edged past him, went swinging up the corridor. Tony caught up with her.

"You can help me," he said, voice edged. "Will you answer a few questions?"

She stopped, her penciled brows drawn together. She shrugged. "Fire away, lieutenant."

She leaned against the wall, tapping it patiently with one manicured fingernail.

Tony said, "All I know about the Hoderay-Hammond drive, Miss Overland, is that it reverses the Fitz-Gerald Contraction principle. It makes use of a new type of mechanical advantage. A moving object contracts in the direction of motion. Therefore a stationary object, such as a ship, can be made to move if you contract it in the direction you want it to move. How that's accomplished, though, I don't know."

"By gravitons— Where have you been all your life?"

"Learning," said Tony, "good manners."

She flushed. Her fingers stopped drumming. "If you realized you were interrupting important work,

you'd know why I forget my manners. We were trying to finish this up so daddy could get back to his farewell dinner at the university. I guess the professors guessed right when they sent his— Well, why should I explain that to you?"

"I'm sure," said Tony, "I don't know."

"Well, go on," she said coldly.

Tony lighted a cigarette, offered her one with an apology. She shook her head impatiently.

Tony eyed her through the haze of smoke. "Back there on 1007 I saw a skeleton with a ring on its finger."

She seemed nonplused. "Well. Was it a pretty ring?"

Tony said grimly, "The point is, Braker never got near that skeleton after I saw it, but that same ring is now on his finger."

Startlement showed in her eyes. "That doesn't sound very plausible, lieutenant!"

"No, of course it doesn't. Because then the same ring is in two different places at the same time."

"And of course," she nodded, "that would be impossible. Go on. I don't know what you're getting at, but it certainly is interesting."

"Impossible?" said Tony. "Except that it happens to be the truth. I'm not explaining it away, Miss Overland, if that's your idea. Here's something else. The skeleton is a human skeleton, but it existed before the human race existed."

She shoved herself away from her indolent position. "You must be crazy."

Tony said nothing.

"How did you know?" she said sharply.

"I *know*. Now *you* explain the H-H drive, if you will."

"I will!" She said: "Gravitons are the ultimate particle of matter. There are 1846 in a proton, one in an electron, which is the reason why a proton is 1846 times as heavy as an electron.

"Now you can give me a cigarette, lieutenant. I'm curious about this thing, and if I can't get to the bottom of it, my father certainly will."

After a while, she blew out smoke nervously.

She continued, speaking rapidly: "A Wittenberg disrupter tears atoms apart. The free electrons are shunted off into accumulators, where we get power for lighting, cooking, heating and so forth. The protons go into the proton analyzer, where the gravitons are ripped out of them and stored in a special type of spherical field. When we want to move the ship, the gravitons are released. They spread through the ship and everything in the ship.

"The natural place for a graviton is in a proton. The gravitons rush for the protons—which are already saturated with 1846 gravitons. Gravitons are unable to remain free in three-dimensional space. They escape along the time line, into the past. The reaction contracts the atoms of the ship and everything in the ship, and shoves it forward along the opposite space-time line—forward into the future and forward in space. In the apparent space of a second, therefore, the ship can travel thousands of miles, with no acceleration effects.

"Now, there you have it, lieutenant. Do what you can with it."

Tony said, "What would happen if the gravitons were forced into the future rather than the past?"

"Lieutenant, I would have been surprised if you hadn't said that! Theoretically, it's an impossibility. Anybody who knows gravitons would say so. But if Braker is wearing a ring that a skeleton older than

the human race is also wearing—*Ugh!*"

She put her hands to her temples in genuine distaste. "We'll have to see my father," she said wearily. "He'll be the one to find out whether or not you make this up as you go along."

Erle Masters looked from Tony to Laurette.

"You believe this bilge he's been handing you?"

"I'm not interested in what you think, Erle. But I am in what you do, daddy."

Overland looked uneasy, his stubbled jaws barely moving over a wad of rough-cut.

"It does sound like . . . er . . . bilge," he muttered. "If you weren't an IPF man, I'd think you were slightly off-center. But—one thing, young man. How did you know the skeleton was older than the human race?"

"I said it existed *before* the human race."

"Is there any difference?"

"I think there is—somehow."

"Well," said Overland patiently, "how do you know it?"

Tony hesitated. "I don't really know. I was standing at the mouth of the cave, and something—or someone—told me."

"*Someone!*" Masters blasted the word out incredulously.

"I don't know!" said Tony. "All I know is what I'm telling you. It couldn't have been supernatural—could it?"

Overland said quickly, "Don't let it upset you, son. Of course it wasn't supernatural. There's a rational explanation somewhere, I guess. But it's going to be hard to come by."

He nodded his head abstractedly, and kept on nodding it like a marionette. Then he smiled peculiarly.

"I'm old now, son—you know? And I've seen a lot. I don't disbelieve anything. There's only one logical step for a scientist to take now, and that's to go back and take a look at that skeleton."

Masters' breath sounded. "You can't do that!"

"But we're going to. And remember that I employ *you*, because Laurette asked me to. Now turn this ship back to 1007. This might be more important than patching up a torn-up world at that." He chuckled.

Laurette shook her blond head. "You know," she said musingly, "this might be the very thing we *shouldn't* do, going back like this. On the other hand, if we went on our way, *that* might be the thing we shouldn't do."

Masters muttered, "You're talking nonsense, Laurette."

He ostentatiously grabbed her bare arm, and led her from the room after her father, throwing Tony a significant glance as he passed.

Tony expelled a long breath. Then, smiling twistedly, he went back to the lounge, to wait—for what? His stomach contracted again with revulsion—or was it a premonition?

Braker came sharply to his feet. "What's up, Crow?"

"Let me see that ring again," Tony said. After a minute he raised his eyes absently. "It's the same ring," he muttered.

"I wish to hell," Braker exploded, "I know what you were talking about!"

Tony looked at him obliquely, and said under his breath, "Maybe it's better you don't."

He sat down and lighted a cigarette. Braker swore, and finally wandered to the window. Tony

knew what he was thinking: of Earth; of the cities that teemed; of the vast stretches of open space between the planets. Such would be his thoughts. Braker, who loved life and freedom.

Braker, who wore a ring—

Then the constellations showing through the port abruptly changed pattern.

Braker leaped back, eyes bulging. "What the—"

Yates, sitting sullenly in the corner, came alertly to his feet. Braker mutely pointed at the stars.

"I could have sworn," he said thickly.

Tony came to his feet. He had seen the change. But his thoughts flowed evenly, coldly, a smile frozen on his lips.

"You saw right, Braker," he said coldly, then managed to grab the guide rail as the ship bucked. Braker and Yates sailed across the room, faces ludicrous with surprise. The ship turned the other way. The heavens spun, the stars blurring. Something else Tony saw beside blurred stars: a dull-gray, monstrous landscape, a horizon cut with mountains, a bright, small Sun fringing tumbled clouds with reddish, ominous silver. Then stars again, rushing past the port, simmering through an atmosphere—

Blackness crushed its way through Tony Crow's consciousness, occluding it until, finally, his last coherent thought had gone. Yet he seemed to know what had happened. There was a skeleton in a cave on an asteroid—millions of years from now. And the ship had struck.

TONY moved, opened his eyes. The lights were out, but a pale shaft of radiance was streaming through the still-intact port. Sounds insinuated themselves into his consciousness. The wet drip of rain, the low murmur of a spasmodic wind, a guttural *kutakikchkut* that drifted eerily, insistently, down the wind.

Tony slowly levered himself to his feet. He was lying atop Braker. The man was breathing heavily, a shallow gash on his forehead. Involuntarily, Tony's eyes dropped to the ring. It gleamed—a wicked eye staring up at him. He wrenched his eyes away.

Yates was stirring, mumbling to himself. His eyes snapped open, stared at Tony.

"What happened?" he said thickly. He reeled to his feet. *"Phew!"*

Tony smiled through the gloom. "Take care of Braker," he said, and turned to the door, which was warped off its hinges. He loped down the corridor to the control room, slowing down on the lightless lower deck ramp. He felt his way into the control room. He stumbled around until his foot touched a body. He stooped, felt a soft, bare arm. In sudden, stifling panic, he scooped Laurette's feebly breathing body into his arms. She might have been lead, as his feet seemed made of lead. He forced himself up to the upper corridor, kicked open the door of her father's room, placed her gently on the bed. There was light here, probably that of a moon. He scanned her pale face anxiously, rubbing her arms toward the heart. Blood came to her cheeks. She gasped, rolled over. Her eyes opened.

"Lieutenant," she muttered.

"You all right?"

Tony helped her to her feet.

"Thanks, lieutenant. I'll do." She tensed. "What about my father?"

"I'll bring him up," said Tony.

Five minutes later, Overland was stretched on the bed, pain in his

open eyes. Three ribs were broken. Erle Masters hovered at the foot of the bed, dabbing at one side of his face with a reddened handkerchief, a dazed, scared look in his eyes. Tony knew what he was scared of, but even Tony wasn't playing with that thought now.

He found a large roll of adhesive in the ship's medicine closet. He taped Overland's chest. The breaks were simple fractures. In time, they would do a fair job of knitting. But Overland would have to stay on his back.

Masters met Tony's eyes reluctantly.

"We'll have to get pressure suits and take a look outside."

Tony shrugged. "We won't need pressure suits. We're already breathing outside air, and living under this planet's atmospheric pressure. The bulkheads must be stowed in some place."

Overland's deep voice sounded, slowly. "I think we've got an idea where we are, Erle. You can feel the drag of this planet—a full-size planet, too. Maybe one and a half gravities. I can feel it pulling on my ribs." A bleak expression settled on his stubbled face. He looked at Tony humorlessly. "Maybe I'm that skeleton, son."

Tony caught his breath. "Nonsense. Johnny Braker's wearing the ring. If anybody's that skeleton, he is. *Not* that I wish him any bad luck, of course." He nodded once, significantly, then turned toward the door with a gesture at Masters. Masters, plainly resenting the soundless command, hesitated, until Laurette made an impatient motion at him.

THEY PROWLED through the gloomy corridor toward the small engine room, pushed the door open. The overpowering odor of ozone and burning rubber flung itself at them.

Masters uttered an expressive curse as Tony played a beam over what was left of the reversed Fitz-Gerald Contraction machinery. His nails clicked startlingly loud in the heavy silence.

"Well, that's that," he muttered.

"What d'you mean—that's that?" Tony's eyes bored at him through the darkness.

"I mean that we're stuck here, millions of years ago." He laughed harshly, unsteadily.

Tony said without emotion, "Cut it out. Hasn't this ship got auxiliary rocket blasts?"

"Naturally. But this is a one and a half gravity planet. Anyway, the auxiliary jets won't be in such good condition after a fifty-foot drop."

"Then we'll fix 'em," said Tony sharply. He added, "What makes you so sure it's millions of years ago, Masters?"

Masters leaned back against the door jamb, face as cold and hard as stone.

"Don't make me bow to you any more than I have to, lieutenant," he said ominously. "I didn't believe your story before, but I do now. You predicted this crack-up—it had to happen. So I'm ready to concede it's millions of years ago; mainly because there wasn't any one and a half gravity planet within hundreds of millions of miles of the asteroid belt. But there *used* to be one."

Tony said, lips barely moving, "Yes?"

"There used to be one—*before the asteroids.*"

Tony smiled twistedly. "I'm glad you realize that."

He turned and went for the air lock, but, since the entire system of electric transmission had gone wrong somewhere, he abandoned it

and followed a draft of wet air. He jerked open the door of a small storage bin, and crawled through. There was a hole here, that had thrust boxes of canned goods haphazardly to one side. Beyond was the open night.

Tony crawled out, stood in the lee of the ship, occasional stinging drops of rain lashing at their faces. Wind soughed across a rocky plain. A low roar heralded a nearby, swollen stream. A low *kutakitchkut* monotonously beat against the night, night-brooding bird, Tony guessed, nested in the heavy growth flanking a cliff that cut a triangular section from a heavily clouded sky. Light from a probable moon broke dimly through clouds on the leftward horizon.

Masters' teeth chattered in the cold.

Tony edged his way around the ship, looking the damage over. He was gratified to discover that although the auxiliary rocket jets were twisted and broken, the only hole was in the storage bin bulkheads. That could be repaired, and so, in time, could the jets.

They started to enter the ship when Masters grasped his arm. He pointed up into the sky, where a rift in the clouds showed.

Tony nodded slowly. Offsetting murkily twinkling stars, there was another celestial body, visible as a tiny crescent.

"A planet?" muttered Tony.

"Must be." Masters' voice was low.

They stared at it for a moment, caught up in the ominous, baleful glow. Then Tony shook himself out of it, went for the storage bin.

WALKING DOWN the corridor with Masters, Tony came upon Braker and Yates.

Braker grinned at him, but his eyes were ominous.

"What's this I hear about a skeleton?"

Tony bit his lip. "Where'd you hear it?"

"From the girl and her old man. We stopped outside their room a bit. Well, it didn't make sense, the things they were saying. Something about an emerald ring and a skeleton and a cave." He took one step forward, an ugly light in his smoky eyes. "Come clean, Crow. How does this ring I've got on my finger tie up with a skeleton?"

Tony said coldly, "You're out of your head. Get back to the lounge."

Braker sneered. "Why? You can't make us stay there with the door broken down."

Masters made an impatient sound. "Oh, let them go, lieutenant. We can't bother ourselves about something as unimportant as this. Anyway, we're going to need these men for fixing up the ship."

Tony said to Yates, "You know anything about electricity? Seems to me you had an E.E. once."

Yates' thin face lighted, before he remembered his sullen pose. "O. K., you're right," he muttered. He looked at Braker interrogatively.

Braker said: "Sorry. We're not obligated to work for you. As prisoners, you're responsible for us and our welfare. We'll help you or whoever's bossing the job *if* we're not prisoners."

Tony nodded. "Fair enough. But tonight, you stay prisoners. Tomorrow, maybe not," and he herded them back into the lounge. He cuffed them to the guide rail, and so left them, frowning a little. Braker had been too acquiescent.

The reason for that struck Tony hard. Walking back along the corridor, he saw something gleaming on

the floor. He froze. Revulsion gripping him, he slowly picked up the ring.

Masters turned, said sharply, "What's up?"

Tony smiled lopsidedly, threw the ring into the air twice, speculatively, catching it in his palm. He extended it to Masters.

"Want a ring?"

Masters' face went white as death. He jumped back.

"Damn you!" he said violently. "Take that thing away!"

"Braker slipped it off his finger," said Tony, his voice edging into the aching silence. Then he turned on his heel, and walked back to the lounge. He caught Braker's attention.

He held the ring out.

"You must have dropped it," he said.

Braker's lips opened in a mirthful, raucous laugh.

"You can have it, copper," he gasped. "*I* don't want to be any damned skeleton!"

Tony slipped the ring into his pocket and walked back down the corridor with a reckless swing to his body.

He knocked on the door to Overland's room, opened it when Laurette's voice sounded.

Masters and Laurette looked at him strangely.

Overland looked up from the bed.

"Lieutenant," he said, an almost ashamed look on his face, "sometimes I wonder about the human mind. Masters seems to think that now *you've* got the ring, *you're* going to be the skeleton."

Masters' nails clicked. "It's true, isn't it? The outlaws know about the ring. We know about it. But Crow *has* the ring, and it's certain none of us is going to take it."

Overland made an exasperated clicking sound.

"It's infantile," he snapped. "Masters, you're acting like a child, not like a scientist. There's only one certainty, that one of us is going to be the skeleton. But there's no certainty which one. And there's even a possibility that all of us will die." His face clouded angrily. "And the most infantile viewpoint possible seems to be shared by all of you. You've grown superstitious about the ring. Now it's—a ring of death! Death to him who wears the ring! *Pah!*"

He stretched forth an imperative hand.

"Give it to me, lieutenant! I'll tell you right now that no subterfuge in the universe will change the fact of my being a skeleton if I *am* the skeleton; and vice versa."

Tony shook his head. "I'll be keeping it—for a while. And you might as well know that no scientific argument will convince anybody the ring is not a ring of death. For, you see, it is."

Overland sank back, lips pursed. "What are you going to do with it?" he charged. When Tony didn't answer, he said pettishly, "Oh, what's the use! On the face of it, the whole situation's impossible." Then his face lighted. "What did you find out?"

TONY briefly sketched his conclusions. It would be two or three weeks before they could repair the rocket jets, get the electric transmission system working properly.

Overland nodded absently. "Strange, isn't it!" he mused. "All that work DeTosque, Bodley, Morrell, Haley, the Farr brothers and myself have done goes for nothing. Our being here proves the theory they were working on."

Laurette smiled lopsidedly at Tony.

"Lieutenant," she said, "maybe the skeleton was a woman."

"A woman!" Masters' head snapped around, horror on his face. "Not you, Laurette!"

"Why not? Women have skeletons, too—or didn't you know?" She kept her eyes on Tony. "Well, lieutenant? I put a question up to you."

Tony kept his face impassive. "The skeleton," he said, without a tremor, "was that of a man."

"Then," said Laurette Overland, stretching out her palm, cup-shaped, "give me the ring."

Tony froze, staring. That his lie should have this repercussion was unbelievable. Out of the corner of his eye he saw Overland's slowly blanching face. On Masters, Laurette's statement had the most effect.

"Damn you, Crow!" he said thickly. "This is just a scheme of yours to get rid of the ring!" He lunged forward.

The action was unexpected. Tony fell backward under the impact of the man's fist. He sprawled on his back. Masters threw himself at him.

"Erle, you utter fool!" That was Laurette's wail.

Disgust settled on Tony's face. He heaved, by sheer muscular effort, and threw Masters over on his back. His fist came down with a brief but pungent *crack*. Masters slumped, abruptly lifeless.

Tony drew himself to his feet, panting. Laurette was on her knees beside Masters, but her dismayed eyes were turned upward to Tony.

"I'm sorry, lieutenant!" she blurted.

"What have you got to be sorry about?" he snapped. "Except for being in love with a fool like that one."

He was sorry for it the second he said it. He didn't try to read Laurette's expression, but turned sullen eyes to Overland.

"It's night," he said abruptly, "and it's raining. Tomorrow, when the Sun comes up, it'll probably be different. We can figure out the situation then, and start our plans for—" He let the sentence dangle. Plans for what? He concluded, "I suggest we all get some sleep," and left.

He arranged some blankets on the floor of the control room, and instantly went to sleep, though there were times when he stirred violently. The skeleton was in his dreams—

THERE WERE five of them at the breakfast table. Laurette serving; Masters beside her, keeping his eyes sullenly on the food; Braker, eating as heartily as his cuffed hands would allow; Yates, picking at his food with disinterest.

Tony finished his second cup of coffee, and scraped his chair back.

"I'll be taking a look around," he told Laurette in explanation. He turned to the door.

Braker leaned back in his chair until it was balanced on two legs, and grinned widely.

"Where you going, Mr. Skeleton?"

Tony froze.

"After a while, Braker," he said, eyes frigid, "the ring will be taken care of."

Yates' fork came down. "If you mean you're going to try to get rid of it, you know you can't do it. It'll come back." His eyes were challenging.

Masters looked up, a strange, milling series of thoughts in his sullen eyes. Then he returned to his food.

Tony, wondering what that ex-

pression had meant, shrugged and left the room; and shortly, the ship, by way of the cavity in the storage bin.

He wandered away from the ship, walking slowly, abstractedly, allowing impressions to slip into his mind without conscious resistance. There was a haunting familiarity in this tumbled plain, though life had no place in the remembrance. There was some animal life, creatures stirring in the dank humus, in long, thick grass, in gnarled tree tops. This was mountain country and off there was a tumbling mountain stream.

He impelled himself toward it, the tiny, yet phenomenally bright Sun throwing a shadow that was only a few inches long. It was high "noon."

He stood on the brink of the rocky gorge, spray prismatically alive with color, dashing up into his face. His eyes followed the stream up to the mountain fault where water poured downward to crush at the rocks with the steady, pummeling blow of a giant. He stood there, lost in abstraction, other sounds drowned out.

All except the grate of a shoe behind him. He tried to whirl; too late! Hands pushed against his back —in the next second, he had tumbled off the brink of the chasm, clutching wildly, vainly, at thick spray. Then, an awful moment of freezing cold, and the waters had inclosed him. He was borne away, choking for air, frantically flailing with his arms.

He was swept to the surface, caught a chaotic glimpse of Sun and clouded sky and rock, and then went under again, with a half lungful of air. He tensed, striving to sweep away engulfing panic. A measure of reason came back. Hands and feet began to work in purposeful unison. The surface broke around him. He stayed on top. But that was only because the stream was flowing darkly, swiftly, evenly. He was powerless to force himself against this current.

He twisted, savagely looking for some sign of release. A scaly, oily tree limb came at him with a rush. One wild grab, and the limb was bending downstream, straining against the pressure his body was exerting. He dashed hair from his eyes with one trembling hand, winced as he saw the needle-bed of rapids a hundred feet downstream. If that limb hadn't been there— His mind shuddered away from the thought.

Weakly, he drew himself hand over hand upward, until the tree trunk was solidly below him. He dropped to the ground, and lay there, panting. Then he remembered the hands on his back. With a vicious motion, he jerked out his key ring. That was the answer— the key to the cuffs was gone, taken during the night, of course! Erle Masters, then, had pulled this prize play, or perhaps one of the outlaws, after Masters released him.

After a while, he came to his feet, took stock of his surroundings. Off to his left, a cliff side, and scarcely a half mile distant, the pathetically awry hulk of the ship, on the top of the slope that stretched away.

The cliff side came into his vision again. A fault in the escarpment touched a hidden spot in his memory. He involuntarily started toward it. But he slowed up before he got to the fault—which was really a cave that tapered out to nothingness as its sides rose.

The cave!

And this sloping plain, these mountains, composed the surface of Asteroid 1007, millions of years from now.

TONY DROPPED emotionlessly to his knees at the mouth of the cave. Not so long ago, he had done the same thing. Then there had been a complete, undisjointed skeleton lying there. Somehow, then, he had known the skeleton existed before the human race—as if it were someone —the skeleton?—that had spoken to him across the unutterable years. The skeleton? That could not be! Yet, whence had come the memory?

He took the ring from his pocket and put it on his finger. It gleamed.

He knelt there for minutes, like a man who worships at his own grave, and he was not dead. Not dead! He took the ring from his finger, then, a cold, bleak smile growing on his face.

He came to his feet, a rising wind whipping at his hair. He took a half dozen running steps toward the river, brought his arm over his shoulder in a throwing gesture.

Somehow the ring slipped from his fingers and fell.

He stooped, picked it up. This time, he made it leave his hand. It spun away, twinkling in the faint sunlight. But the gravity had hold of it, and it fell on the brink of the river, plainly visible.

A dry, all-gone feeling rose in Tony's throat. Grimly, he went forward, picked it up again. Keeping his eyes on it, he advanced to the brink of the river gorge. He held the ring over the darkly swirling waters, slowly released it.

It struck the river like a plummet. The waters inclosed it and it was gone. He looked at the spot where it had disappeared, half expecting it to spring back up into his hand. But it was gone. Gone for good!

He started dazedly back to the ship, moving in an unreal dream. Paradoxical that he had been able to get rid of it. It had dropped from his hand once, fallen short of the river once. The third time it had given up trying!

When he came up to the ship, Masters was standing at the stern, looking at the broken rocket jets. He turned, and saw Tony, water still dripping from his uniform. He fell back a step, face turned pallid.

Tony's lips curled. "Who did it?"

"D-did what?"

"You know what I mean," Tony bit out. He took three quick steps forward.

Masters saw that, and went reckless. Tony side-stepped him, brought his left arm around in a short arc. Masters went down cursing. Tony knelt, holding Masters down by the throat. He felt through his pockets, unearthed the key to the cuffs. Then he hauled Masters to his feet and shook him. Masters' teeth clicked.

"Murderer!" Tony snapped, white with rage.

Masters broke loose. "I'd do it again," he said wildly, and swung. He missed. Tony lashed out with the full power of his open palm, caught Masters on the side of the head. Masters went reeling back, slammed against the side of the ship. Tony glared at him, and then turned on his heel.

He met Laurette Overland coming down the stairs to the upper corridor.

"Lieutenant!" Her eyes danced with excitement. "I've been looking for you. Where in the world have you been?"

"Ask Masters." He urged himself down the corridor, jaw set. She fell into step beside him, running to keep up with his long strides.

"You're all wet!" she exclaimed. "Can't you tell me what happened? Did you go swimming?"

"Involuntarily." He kept on walking.

She grabbed his arm, and slowed him to a stop. An ominous glint replaced her excitement.

"What," she said, "did you mean when you said I should ask Erle about it? Did he push you in? If he did, I'll—" She was unable to speak.

Tony laughed humorlessly. "He admitted it. He stole my key to the handcuffs with the idea that it would be easier to free Braker and Yates that way after I was . . . uh . . . properly prepared to be a skeleton."

Her head moved back and forth.

"That's horrible," she said lowly. "Horrible."

He held her eyes. "Perhaps I shouldn't have told you about it," he said, voice faintly acid. "He's your fiancé, isn't he?"

She nodded, imperceptibly, studying him through the half gloom. "Yes. But maybe I'll change my mind, lieutenant. Maybe I will. But in the meantime, come along with me. Daddy's discovered something wonderful."

PROFESSOR OVERLAND'S head was propped up. He had a pencil and paper on his pyramided legs.

"Oh. Lieutenant! Come in." His face lighted. "Look here! Gravitons *can* thrust their way through to the future, giving the ship a thrust into the past. But only if it happened to enter the spherical type of etheric vacuum. This vacuum would be minus everything—electrons, photons, cosmic rays and so forth, except under unusual circumstances. At some one time, in either the past or future, there might be a stream of photons bridging the vacuum. Now, when gravitons are ejected into the past, they grab hold of light photons, and become ordinary negative electrons. Now say the photons are farther away in the past than they are in the future. The gravitons therefore follow the line of least resistance and hook up with photons of the future. The photons in this case were perhaps hundreds of millions of years away in the vacuum. In traveling that time-distance, the gravitons kicked the ship back for a proportionate number of years, burned up our machinery, and wrecked us on this suddenly appearing before-the-asteroid world."

Laurette said brightly, "But that isn't the important part, daddy."

"I can find another of those etheric vacuums," Overland went on, preoccupiedly, pointing out a series of equations. "Same type, same structure. But we have to go to the planet Earth in order to rebuild the reversed contraction machinery. We'll find the materials we need there." He glanced up. "But we have to get off this world before it cracks up, lieutenant."

Tony started. "Before this world cracks up?"

"Certainly. Naturally. You can—" His heavy brows came down abruptly. "You didn't know about that, did you? Hm-m-m." He stroked his jaw, frowning. "You recall the crescent planet you and Masters saw? Well, he took some readings on that. It's wonderful, son!" His eyes lighted. "It's an ill wind that blows nobody good. Not only do we know now that the asteroid evolved from a broken-up planet, but we also know the manner in which that planet broke up. Collision with a heavy, smaller body."

Tony paled. "You mean—" he said huskily. "Good heavens!" Sweat stood out on his forehead. "How soon will that happen?" he said ominously.

"Well, Erle has the figures. Something over eighteen or nineteen days. It'll be a crack-up that'll shake the Sun. And we'll be here to witness it." He smiled wryly. "I'm more scientist than man, I guess. I never stop to think we might die in the crack-up, and furnish six skeletons instead of one."

"There'll be no skeletons," Tony said, eyes narrowed. "For one thing, we can repair the ship, though we'll have to work like mad. For another—I threw the ring into the river. It's gone."

Laurette seemed to pale. "I . . . I don't see how that could be done," she stammered. "You couldn't get rid of it, not really—could you?"

"It's gone," Tony said stubbornly. "For good. And don't forget it. There'll be no skeleton. And you might try to impress that on Masters, so he doesn't try to produce one," he added significantly.

He left the room with a nod, a few seconds later stepped into the lounge. Braker and Yates turned around. Both were cuffed.

Tony took the key from his pocket and the cuffs fell away. In brief, pungent tones, then, he explained the situation, the main theme being that the ship had to be well away from the planet before the crack-up Yates would go over the wiring system. Braker, Masters and Tony would work with oxyacetylene torches and hammers over the hole in the hull and the rocket jets.

Then he explained about the ring.

Yates ran a thin hand through his yellow hair.

"You don't do it that easy," he said in his soft, effortless voice. "There's a skeleton up there, and it's got Braker's ring on its finger. It's got to be accounted for, don't it? It's either me or you or Braker or the girl or her old man or Masters. There ain't any use trying to avoid it, either." His voice turned sullen. He looked at Braker, then at Tony. "Anyway, I'm keeping my back turned the right way so there won't be any dirty work."

Braker's breath sounded. "Why, you dirty rat," he stated. He took a step toward Yates. "You would think of that. And probably you'd try it on somebody else, too. Well, don't go pulling it on me, understand." He scowled. "And you better watch him, too, Crow. He's pure poison—in case you got the idea we were friends."

"Oh, cut it out," Tony said wear-

ily. He added, "If we get the ship in working order, there's no reason why all six of us shouldn't get off —alive." He turned to the door, waved Braker and Yates after him. Yet he was sickeningly aware that *his* back was turned to men who admittedly had no conscience to speak of.

A WEEK passed. The plain rang with sledge-hammer strokes directed against the twisted tubes. Three were irreplaceable.

Tony, haggard, tired, unbelievably grimed from his last trip up the twisted, hopeless-looking main blast tube, was suddenly shocked into alertness by sounds of men's voices raised in fury outside the ship. He ran for the open air lock, and urged himself toward the ship's stern. Braker and Yates were tangling it.

"I'll kill him!" Braker raged. He had a rock the size of his fist in his hand. He was attempting, apparently, to knock Jawbone Yates' brains out. Erle Masters stood near, chewing nervously at his upper lip.

With an oath, Tony wrenched the rock from Braker's hand, and hauled the man to his feet. Yates scrambled erect, whimpering, mouth bleeding.

Braker surged wildly toward him. "The dirty —!" he snarled. "Comes up behind me with an oxy torch!"

Yates shrilled, backing up, "That's a lie!" He pointed a trembling hand at Braker. "It was *him* that was going to use the torch on *me!*"

"Shut up!" Tony bawled. He whirled on Masters. "You've got a nerve to stand there," he snarled. "But then you *want* a skeleton! Damned if you're going to get one! Which one did it?"

Masters stammered, "I didn't see it! I . . . I was just—"

"The hell you say!" Tony whirled on the other two, transfixing them with cold eyes.

"Cut it out," he said, lips barely moving. "Either you're letting your nerves override you, or either one or both of you is blaming the other for a move he made himself. You might as well know the skeleton I saw was intact. What do you think a blow torch would do to a skeleton?" His lips curled.

Braker slowly picked up his torch with a poisonous glance at Yates. Yates as slowly picked his sledge hammer. He turned on Tony.

"You said the skeleton was intact?" Eagerness, not evident from his carefully sullen voice, was alive in his eyes.

Tony's glance passed over the man's broken, protruding jaw.

"The head," he replied, "was in shadow."

He winced. The passing of hope was a hard thing to watch, even in a man like Jawbone Yates.

He turned, releasing his breath in a long, tired sigh. What a man-sized job this was. Outwitting fate —negating what *had* happened!

TONY WORKED longer than he expected that day, tracing down the web of asbestos-covered rocket fuel conduits, marking breaks down on the chart. The Sun sank slowly. Darkness swept over the plain, along with a rising wind. He turned on the lights, worked steadily on, haggard, nerves worn. Too much work to allow a slowing up. The invading planet rose each night a degree or more larger. Increasing tidal winds and rainstorms attested to a growing gravitational attraction.

He put an x-mark on the check —and then froze. A scream had gone blasting through the night.

Tony dropped pencil and chart,

went flying up the ramp to the upper corridor. He received the full impact of Masters' second scream. Masters had left his room, was running up the corridor, clad in pajamas. There was a knife sticking out of his shoulder.

Tony, gripped with horror, impelled himself after the man, caught up with him as he plunged face downward. He dropped to one knee, staring at a heavy meat knife that had been plunged clear through the neck muscles on Masters' left shoulder, clearly a bid for a heart stroke.

Masters turned on his side. He babbled, face alive with horror. Tony rose, went with the full power of his legs toward the lounge.

A figure showed, running ahead of him. He caught up with it, whipped his arm around the man's neck.

"You!"

Yates squirmed tigerishly. He turned, broke loose, face alive with fury. Tony's open palm lashed out, caught Yates full on the face. Yates staggered and fell. He raised himself to one elbow.

"Why'd you do it?" Tony rasped, standing over him.

Yates' face was livid. "Because I'd rather live than anything else I can think of!" His booted foot lashed out. Tony leaped back. Yates rose. Tony brought his bunched fist up from his knees with all the ferocity he felt. Yates literally rose an inch off the floor, sagged, and sopped to the floor.

Tony picked him up in one arm, and flung him bodily into the lounge.

Braker rose from his sleeping position on a cushioned bench, blinking.

Tony said cuttingly, "Your pal ran a knife through Masters' shoulder."

"Huh?" Braker was on his feet. "Kill him?" In the half-light his eyes glowed.

"You'd be glad if he did!"

Braker looked at Yates. Then, slowly, "Listen, copper. Don't make the mistake of putting me in the same class with a rat like Yates. I don't knife people in the back. But if Masters was dead, I'd be glad of it. It might solve a problem that's bothering the rest of us. What you going to do with him?"

"I already did it. But tell Yates he better watch out for Masters, now."

Braker grunted scornfully. "Huh. Masters'll crack up and down his yellow back."

Tony left.

LAURETTE and Overland were taking care of Masters in his room. The wound was clean, hardly bleeding.

Overland, somewhat pale, was hanging onto the door. "It's not serious, honey," he said, as her fingers nimbly wound bandages.

"Not serious?" She turned stricken eyes up to Tony. "Look at him. And daddy says it's not serious!"

Tony winced. Masters lay face down on the bed, babbling hysterically to himself, his eyes preternaturally wide. His skin was a pasty white, and horror had etched flabby lines around his lips.

"Knifed me," he gasped. "Knifed me. I was sleeping, that was the trouble. But I heard him—" He heaved convulsively, and buried his face in his pillow.

Laurette finished her job, face pale.

"I'll stay here the rest of the night," Tony told her.

Overland gnawed painfully at his lower lip.

"Who did it?"

Tony told him.

"Can't we do something about it?"

"What?" Tony laughed scornfully. "Masters had the same trick pulled on him that he pulled on me. He isn't any angel himself."

Overland nodded wearily. His daughter helped him out of the room.

During the night, Masters tossed and babbled. Finally he fell into a deep sleep. Tony leaned back in a chair, moodily listening to the sough of the wind, later on watching the Sun come up, staining the massed clouds with running, changing streaks of color.

Masters awoke. He rolled over. He saw Tony, and went rigid. He came to his feet, and huddled back against the wall.

"Get out," he gasped, making a violent motion with his hand.

"You're out of your head," said Tony angrily. "It was Yates."

Masters panted, "I know it was. What difference does it make? You're all in the same class. I'm going to watch myself after this. I'm going to keep my back turned the right way. I'm going to be sure that none of you—"

Tony put his hands on his hips, eyes narrowed.

"If you've got any sense, you'll try to forget this and act like a human being. Better to be dead than the kind of man you'll turn into."

"Get out. Get out!" Masters waved his hand again, shuddering.

Tony left, shaking his head slowly.

TONY STOOD outside the ship, smoking a cigarette. It was night. He heard a footstep behind him. He fell back a step, whirling.

"Nerves getting you, too?" Laurette Overland laughed shakily, a wool scarf blowing back in the heavy, unnatural wind.

Tony relaxed. "After two weeks of watching everybody watching everybody else, I guess so."

She shivered. He sensed it was not from the bite of the wind. "I suppose you mean Erle."

"Partly. Your father's up and around today, isn't he? He shouldn't have gotten up that night."

"He can get around all right."

"Maybe he better lock himself in his room." He smiled with little amusement. "The others are certain the ring will come back."

She was silent. Through the ominous gloom, lit now by a crescent planet that was visible as a small moon, and growing steadily larger, he saw a rueful, lopsided smile form on her face. Then it was gone.

She said, "Erle was telling me the jets are in bad condition. A trial blast blew out three more."

"That's what happened."

She went on: "He also told me there was a definite maximum weight the jets could lift in order to get us free of the gravity. We'll have to throw out everything we don't need. Books, rugs, clothing, beds." She drew a deep breath. "And in the end, maybe a human being."

Tony's smile was frozen. "Then the prophecy would come true."

"Yes. It is a prophecy, isn't it?" She seemed childishly puzzled. She added, "And it looks like it has to come true. Because— Excuse me, lieutenant," she said hurriedly, and vanished toward the air lock.

Tony stared after her, his mind crawling with unpleasant thoughts. It was unbelievable, fantastic. So you couldn't outwit fate. The ship would have to be lightened. Guesswork might easily turn into conviction. There might be one human being too many—

Professor Overland came slowly

from the air lock, wincing from the cold after his two weeks of confinement. His haggard eyes turned on Tony. He came forward, looking up at the growing planet of destruction.

"Erle has calculated three days, eight hours and a few minutes. But it's ample time, isn't it, lieutenant?"

"One jet will straighten out with some man-size labor. Then we can start unloading extra tonnage. Lots of it."

"Yes. Yes. I know." He cleared his throat. His eyes turned on Tony, filled with a peculiar kind of desperation. "Lieutenant," he said huskily, "there's something I have to tell you. The ring came back."

Tony's head jerked. "It came back?" he blurted.

"In a fish."

"*Fish?*"

Overland ran a trembling hand across his brow. "Yesterday a week ago, Laurette served fried fish. She used an old dress for a net. I found the ring in what she brought to my room. Well, I'm not superstitious about the ring. One of us *is* the skeleton—up there. We can't avoid it. I put the ring on—more bravado than anything else. But this morning"—his voice sank to a whisper—"the ring was gone. Now I'm becoming superstitious, unscientifically so. Laurette is the only one who could—or would—have taken it. The others would have been glad it was on my finger rather than theirs. Even Erle."

TONY STARED through him. He was remembering Laurette's peculiar smile. Abruptly, he strode toward the ship, calling back hurriedly:

"Better go inside, sir."

In the ship, he knocked sharply on Laurette's door.

She answered nervously, "Yes."

"May I come in?"

"No. No. Do you have to?"

He thought a moment, then opened the door and stepped inside. She was standing near her bed, her eyes haunted.

Tony extended a hand imperatively. "Give me the ring."

She said, her voice low, controlled, "Lieutenant, I'll keep the ring. You tell that to the others. Then there won't be any of this nervous tension and this murder plotting."

He said ominously, "You may wind up a skeleton."

"You said the skeleton was not a woman."

"I was lying."

"You mean," she said, "it *was* a woman?"

Tony said patiently, "I mean that I don't know. I couldn't tell. Do I get the ring, or don't I?"

She drew a deep breath. "Not in the slightest can it decide who will eventually die."

Tony advanced a step. "Even your father doesn't believe that now," he grated.

She winced. "I'll keep the ring and stay in my room except when I cook. You can keep everybody out of the ship. Then there won't be anybody to harm me."

Footsteps sounded in the corridor. Masters entered the room. Tension had drawn hollow circles under eyes that refused to stay still.

"You," he said to Tony, his voice thin, wavering. He stood with his back to the wall. He wet his lips. "I was talking with your father."

"All right, all right," she said irritably. "I've got the ring, and I'm keeping it."

"No, you can't, Laurette. We're going to get rid of it, this time. The six of us are going to watch."

"You can't get rid of it!" Then,

abruptly, she snatched it off her finger. "Here!"

Imperceptibly, he shrank back against the wall.

"There's no use transferring it now. You've got it, you might as well carry it." His eyes swiveled, lighted with a sudden burst of inspiration. "Better yet, let Crow carry it. He represents the law. That would make it proper."

She seemed speechless.

"Can you imagine it? Can you imagine a sniveling creature like him— I'll keep the ring. First my father gets weak in the knees, and then—" She cast a disdainful look at Masters. "I wish you'd both leave me alone, please."

Tony shrugged, left the room, Masters edging out after him.

Tony stopped him.

"How much time have we got left?"

Masters said jerkily, "We've been here fourteen days. It happens on the twenty-fifth. That's eleven days from now, a few hours either way."

"How reliable are your figures?"

Masters muttered, "Reliable enough. We'll have to throw out practically everything. Doors, furniture, clothes. And then—"

"Yes?"

"I don't know," Masters muttered, and slunk away.

It was the twenty-fourth of December.

Tidal winds increased in savagery in direct proportion to the growing angular diameter of the invading planet. Heavy, dully colored birds fought their way overhead. On the flanks of abruptly rising cliff edges, gnarled trees lashed. Rain fell spasmodically. Clouds moved in thoroughly indiscriminate directions. Tentacular leaves whirlpooled. Spray, under the wind's impact, cleared the river gorge. The waterfall was muted.

Rushing voluminous air columns caught at the growing pile emerging from the ship's interior, whisked away clothing, magazines, once a mattress. It did not matter. Two worlds were to crash in that momentous, before-history forming of the asteroids. There was but one certainty. This plain, these mountains —and a cave—were to stay intact through the millions of years.

Inside the air lock, Masters stood beside a heavy weight scale. Light bulbs, dishes, silverware, crashed into baskets indiscriminately, the results weighed, noted, discarded. Doors were torn off their hinges, floors ripped up. Food they would keep, and water, for though they eventually reached Earth, they could not know whether it yet supported life.

The ship, devoid of furnishings, had been a standard eleven tons for an H-H drive. Furnishings, food, et cetera, brought her to over thirteen tons. Under a one and a half gravity, it was twenty tons. Masters' figures, using the firing area the ship now had, with more than half the jets beyond use, were exact enough. The maximum lift the jets would or could afford was plus or minus a hundred pounds of ten and three quarter tons.

Masters looked up from his last notation, eyes red-rimmed, lips twitching. Braker and Yates and Tony were standing in the air lock, watching him.

Fear flurried in Masters' eyes. "What are you looking at me like that for?" he snarled. Involuntarily, he fell back a step.

Yates giggled.

"You sure do take the fits. We was just waiting to see how near we was to the mark. There ain't any-

thing else to bring out."

"Oh, there isn't?" Masters glared. "We're still eight hundred pounds on the plus side. How about the contraction machinery?"

Tony said: "It's our only hope of getting back to the present. Overland needs it to rebuild the drive."

"Pressure suits!"

"We're keeping six of them, in case the ship leaks."

"Doors!" said Masters wildly. "Rugs!"

"All," said Tony, "gone."

Masters' nails clicked. "Eight hundred pounds more," he said hoarsely. He looked at his watch, said, "Eleven hours plus or minus," took off his watch and threw it out. He made a notation on his pad, grinning crookedly. "Another ounce gone."

"I'll get Overland," Tony decided.

"Wait!" Masters thrust up a pointing finger. "Don't leave me alone with those two wolves. They're waiting to pounce on us. Four times one hundred and fifty is six hundred."

"You're bats," said Braker coldly.

"Besides," said Yates, "where would we get the other two hundred pounds?"

Masters panted at Tony, "You hear that? He wants to know where they'd get the other two hundred pounds!"

"I was joking," said Yates.

"Joking! *Joking!* When he tried to knife me once!"

"Because," concluded Yates, "the cards call for only one skeleton. *I'll* get him."

He came back shortly with Laurette and her father.

Overland fitted his glasses over his weak eyes while he listened, glancing from face to face.

"It would be suicidal to get rid of the machinery, what's left of it. I have another suggestion. We'll take out all the direct-vision ports. They might add up to eight hundred pounds."

"Not a bad idea," said Braker slowly. "We can wear pressure suits. The ship might leak anyway."

Masters waved a hand. "Then get at it! Laurette, come here. You've got the ring. *You* don't want to be the skeleton, do you? Put your back to this wall with me."

"Oh, Erle," she said in disgust, and followed her father out.

TONY BROUGHT three hack saws from the pile of discarded tools. Working individual rooms, the three of them went through the ship, sawing the ports off at the hinges, pulling out the port packing material. The ship was now a truly denuded spectacle, the floors a mere grating of steel.

The ports and packing were place on the scale.

"Five hundred—five twenty-five —five sixty-one. That's all!" Masters sounded as if he were going to pieces.

Tony shoved him aside. "Five sixty-one it is. There may be a margin of error, though," he added casually. "Braker, Yates—out with this scale."

The two stooped, heaved. The scale, its computed weight already noted, went out—

Tony said, "Come on, Masters."

Masters trotted behind, doglike, as if he had lost the power of thought. Tony got the six pressure suits out of the corner of the control room, and gestured toward them. Everybody got into the suits.

Tony buckled his helmet down. "Now give her the gun."

Masters stood at the auxiliary rocket control board, face pale, eyes unnaturally wide.

He made numerous minor adjustments. He slowly depressed a plunger. A heavy, vibrating roar split the night. The ship leaped. There was a sensation of teetering motion. In the vision plates, the plain moved one step nearer, as if a new slide had been inserted in a projector. The roar swept against them voluminously. The picture remained the same.

Masters wrenched up the plunger, whirled.

"You see?" he panted. "I could have told you!"

Professor Overland silenced him with a wave of the hand, pain showing in his eyes.

"I make this admission almost at the expense of my sanity," he said slowly. "Events have shaped themselves—incredibly. Backward. In the future, far away, in a time none of us may ever see again, lies a skeleton with a ring on its finger.

"Now which causes which—the result or its cause?"

He took off his glasses, blinked, fitted them back on.

"You see," he said carefully, "some of the things that have happened to us are a little bit incredible. There is Lieutenant Crow's—*memory* of these events. He saw the skeleton and it brought back memories. From where? From the vast storehouse of the past? That does not seem possible. Thus far it is the major mystery, how he *knew* that the skeleton existed before the human race.

"Other things are perhaps more incredible. Three shipwrecks! Incredible coincidence! Then there is the incident of the ring. It is—a ring of death. I say it who thought I would never say it. Lieutenant Crow even had some difficulty throwing it into the river. A fish swallowed it and it came back to me. Then my daughter stole it from me. And she refused to give it up, or let us know what her plans for disposition of it are.

"I do not know whether we are shaping a future that is, or whether a future that is is shaping us.

"And finally we come to the most momentous occurrence of this whole madness. An utterly ridiculous thing like two hundred or two hundred and fifty pounds.

"So we must provide a skeleton. The future that *is* says so."

Silence held. The roar of the river, and the growing violence of the tidal wind rushed in at them. Braker's breath broke loose.

"He's right. Somebody has to get off—and stay off! And it isn't going to be the old man, him being the only one knows how to get us back."

"That's right," said Yates. "It ain't going to be the old man."

Masters shrank back. "Well, don't look at me!" he snarled.

"I wasn't looking at you," Yates said mildly.

TONY'S STOMACH turned rigid. This was what you had to go through to choose a skeleton to die on an asteroid, its skin and flesh to wear and evaporate away and finally wind up millions of years later as a skeleton in a cave with a ring on its finger. These were some of the things you had to go through before you became that skeleton yourself—

"Laurette," he said, "isn't in this lottery."

Braker turned on him. "The hell she isn't!"

Laurette said, voice edged, "I'm in. I might be the straw that broke the camel's back."

Overland said painfully, "Minus a hundred and five might take us over the escarpment. Gentlemen, I'll ar-

range this lottery, being the only non-participant."

Masters snarled, eyes glittering, "You're prejudiced in favor of your daughter!"

Overland looked at him mildly, curiously, as he would some insect. He made a clicking sound with his lips.

Masters pursued his accusation. "We'll cut for high man, low card to take the rap!"

"Yah!" jeered Yates. "With your deck, I suppose."

"Anybody's deck!" said Masters. "All the cards were thrown out. Why weren't yours?"

"Because I knew it would come to this."

"Gentlemen," said Overland wearily. "It won't be a deck. Laurette, the ring."

She started, paled. She said, "I haven't got it."

"Then," said her father, without surprise, "we'll wait around until it shows up."

Braker whirled on him. "You're crazy! We'll draw lots anyway. Better still, we'll find where she put the ring."

"I buried it," said the girl, and her eyes fluttered faintly. "You better leave it buried. You're just proving—"

"Buried it!" blasted Masters. "When she could have used a hammer on it. When she could have melted it in an oxyacetylene torch. When she could—"

"When she could have thrown it in the river and have a fish bring it back! Shut up, Masters." Braker's jawline turned ominous. "Where's the ring? The skeleton's got to have a ring and it's going to have one."

"I'm not going to tell you." She made a violent motion with her hand. "This whole thing is driving me crazy. We don't need the ring for the lottery. Leave it there, can't you?" Her eyes were suddenly pleading. "If you dig it up again, you'll just complete a chain of coincidence that couldn't possibly—"

Overland said, "We won't use the ring in the lottery. It'll turn up later and the skeleton will wear it. We don't have to worry about it, Braker."

Yates said, "Now we're *worrying* about it!"

"Well, it has to be there, doesn't it?" Braker charged.

Tony interrupted by striking a match. He applied flame to a cigarette, sucked in the nerve-soothing smoke.

His eyes were hard, watchful. "Ten hours to get out of range of the collision," his lips said.

"Then we'll hold the lottery now," said Overland. He turned and left the room. Tony heard his heavy steps dragging up the ramp.

THE FIVE stood statuesque until he came back. He had a book in one hand. Five straws stuck out from between the pages, their ends making an even line parallel with the book.

Overland's extended hand trembled slightly.

"Draw," he said. "My daughter may draw last, so you may be sure I am not tricking anybody. Lieutenant? Braker? Anybody. And the short straw loses."

Tony pulled a straw.

"Put it down on the floor at your feet," said Overland, "since someone may have previously concealed a straw."

Tony put it down, face stony.

The straw was as long as the book was wide.

Braker said, in an ugly tone, "Well, I'll be damned!"

Braker drew a shorter one. He put it down.

Yates drew a still shorter one. His smile of bravado vanished. Sweat stood suddenly on his pale forehead.

"Go ahead, Masters!" he grated. "The law of averages says you'll draw a long one."

"I don't believe in the law of averages," said Masters sulkily. "Not on this planet, anyway— I'll relinquish the chance to Laurette."

"That," said Laurette, "is sweet of you."

She took a straw without hesitation.

Masters said nervously, "It's short, isn't it?"

"Shorter than mine." Yates' breath came out in a long sigh. "Go ahead, Masters. Only one straw left, so you don't have to make a decision."

Masters jerked it out.

He put it on the floor. It was long.

A cry burst from Overland's lips. "Laurette!"

She faced their silent stares with curled lips.

"That's that. I hope my hundred and five helps."

Tony dropped his cigarette. "It won't," he snapped. "We were fools for including you."

Suddenly he was watching Braker out of the corner of his eye, his nerves tense.

Overland said in a whisper, "How could I suggest leaving my daughter out? I said a hundred pounds *might* be the margin. If I'd have suggested leaving her out, you'd have accused me of favoritism."

Braker said casually, "There's only going to be one lottery held here."

Yates looked dumfounded. "Why, you blasted fool," he said. "What if we're stuck back here before the human race and there ain't any women?"

"That's what I mean. I thought we'd include the girl. If she was drawn, then we could ask some gentleman to volunteer in her place."

He made a sudden motion. Tony made a faster one. His Hampton came out and up.

"Drop it!" he rasped. "I said— *drop it!*"

Braker's eyes bulged. He looked at the Hampton as if he were unable to comprehend it. He cursed rackingly and dropped the automatic as if it were infested with a radioactive element. It clattered on the metal grating of the denuded floor.

A smile froze on Tony's lips. "Now you can explain where you got that automatic."

Braker, eyes fuming like those of a trapped animal, involuntarily shot a glance at Masters.

Tony turned his head slightly to-

ward Masters. "It would be you," he said bitterly.

He whirled—too late. Yates hurtled toward him, struck him in a flying tackle. Tony fell audibly. He tangled furiously with Yates. No good! Braker, face contorted with glee, leaped on top of him, struggled mightily, and then with the main force of his two gloved hands wrenched the Hampton away, rolled from Tony's reach, then snapped himself to his feet, panting.

"Thanks, Yates!" he exclaimed. "Now get up, Crow. Get up. What a man. What a big hulking man. Weighs two hundred if he weighs an ounce." His lips curled vengefully. "Now get up and get out!"

Overland made a step forward, falteringly.

Braker waved the weapon all-inclusively.

"Back, you," he snarled. "This is my party, and it's a bad-taste party, too. Yates, corner the girl. Masters, stand still—you're my friend if you want to be. All right, lieutenant, get going—and dig! For the ring!" His face screwed up sadistically. "Can't disappoint that skeleton, can we?"

TONY CAME to his feet slowly, heart pounding with what seemed like long-spaced blows against his ribs. Painfully, his eyes ran from face to face, finally centered on Laurette's.

She surged forward against Yates' retaining grip.

"Don't let them do it, lieutenant," she cried. "It's a dirty trick. You're the one person out of the four who doesn't deserve it. I'll—" She slumped back, her voice fading, her eyes burning. She laughed jerkily. "I was just remembering what you did when all the Christmas packages came tumbling down on us. You kissed me, and I slapped you, but I really wanted you to kiss me again."

Yates laughed nastily. "Well, would you listen to that. Masters, you going to stand there and watch them two making love?"

Masters shuddered, his face graying. He whispered, "It's all right. I wish—"

"Cut out the talk!" Braker broke in irritably.

Tony said, as if the other conversation had not intervened, "I wanted to kiss you again, too." He held her wide, unbelieving eyes for a long moment, then dropped his and bit at his shuddering lower lip. It seemed impossible to stand here and realize that this was defeat and that there was no defense against it! He shivered with an unnatural jerk of the shoulders.

"All right," Braker said caustically, "get going."

Tony stood where he was. Braker and everybody else except Laurette Overland faded. Her face came out of the mist, wild, tense, lovely and lovable. Tears were coming from her eyes, and her racking sobs were muted. For a long moment, he hungrily drank in that last glimpse of her.

"Lieutenant!"

He said dully, his eyes adding what his lips did not, "Good-by, Laurette."

He turned, went toward the air lock with dragging feet, like a man who leaves the death house only to walk toward a worse fate. He stopped at the air lock. Braker's gun prodded him.

He stood faintly in the air lock until Braker said, "Out, copper! Get moving."

And then he stepped through, the night and the wild wind inclosing him, the baleful light of the invad-

ing planet washing at him.

Faintly he heard Braker's jeering voice, "So long, copper." Then, with grim, ponderous finality, came the wheeze of the closing air lock.

He wandered into the night for a hundred feet, somehow toward the vast pile that had been extracted from the ship's interior. He seemed lost in unreality. This was the pain that went beyond all pains, and therefore numbed.

He turned. A blast of livid flame burst from the ship's main tube. Smaller parallels of fire suddenly ringed it. The ship moved. It slid along the plain on its runners, hugged the ground for two hundred feet, plummeting down the slope. Tony found himself tense, praying staccato curses. Another hundred feet. The escarpment loomed.

He thrust his arms forcefully upward.

"Lift!" he screamed. "*Lift!*"

The ship's nose turned up, as her short wings caught the force of the wind. Then it roared up from the plain, cleared the escarpment by a scant dozen feet. The echoes of the blast muted the very howl of the wind. The echoes died. Then there was nothing but a bright jewel of light receding. Then there was—nothing.

TONY LOOKED after it, conscious that the skin was stretched dry and tight across his cheekbones. His upflung arms dropped. A little laugh escaped his lips. He turned on his heels. The wind was so furious he could lean against it. It was night, and though the small moon this before-the-asteroids world boasted was invisible, the heavens overflowed with the baleful, pale-white glow of the invading planet.

It was still crescent. He could clearly see the ponderous immensity the lighted horns embraced. The leftward sky was occluded a full two fifth by the falling monster, and down in the seas, the shores would be overborne by tidal waves.

He stood motionless. He was at a loss in which direction to turn. An infinity of directions, and there could be no purpose in any. What type of mind could choose a direction?

That thought was lost. He moved toward the last link he had with humanity—with Laurette. He stood near the trembling pile. There was a cardboard carton, addressed to Professor Henry Overland, a short chain of canceled stamps staring up at him, pointing to the nonexistence of everything that would be. America and Christmas and the post office.

He grinned lopsidedly. The grin was lost. It was even hard to know what to do with one's face. He was the last man on a lost world. And even though he was doomed to death in this unimaginably furious crack-up, he should have some goal, something to live for up to the very moment of death!

He uttered a soft, trapped cry, dashed his gloves to his helmeted face. Then a thought simmered. Of course! The ring! He had to find the ring, and he would. The ring went with the skeleton. And the skeleton went with the ring. Lieutenant Tony Crow—and there could be no doubt of this whatsoever—was to be that skeleton which had grinned up at him so many years ago—no, not ago, acome.

A useless task, of course. The hours went past, and he wandered across the tumbled, howling plain, traversing each square foot, hunting for a telltale, freshly turned mound of earth. He went to the very brink of the river gorge, was immersed in leaping spumes of water. Of the

ring that he must have there was no trace.

Where would she have buried it? How would her mind work? Surely, she could not have heartlessly buried the ring, hiding it forever, when Tony Crow needed it for the skeleton he was to turn into!

He knew the hours were flying. Yet, better to go mad with this tangible, positive purpose, than with the intangible, negative one of waiting spinelessly for death from the lowering monster who now owned the heavens.

How convenient this was. One time-traveled. One witness to the origin of the asteroids. Similarly, one might time-travel and understand at last the unimaginable, utterly baffling process by which the solar system came into being. Nothing as simple as a collision. Or a binary sweeping past a single. Or a whirling nebula. It would be connected with the expanding universe, in some outrageously simple manner. But everything was simple once one knew the answer. For instance—

The ring! Yes, it was as simple as that. Even Laurette Overland would be forced to yield to the result that was influencing its own cause!

Tenseness gave way to relief. One could not baffle the future. Naturally, she'd buried the ring in the cave. Unless she wanted to be perverse. But she would *not* be perverse in a matter like this. Future and present demanded co-operation, if there was to be a logical future!

FORCING himself against a wind that blew indiscriminately, he reached the funnel in the mountainside. The skeleton was not here, naturally. But it would be—with the necessary ring on its finger. Unbelievable how the future shaped its own past! It was as if his own skeleton, which existed millions of years *acome*, on which his own healthy flesh rode *now*, were plainly telling him what he should do.

He dug with a cold methodicity, starting from the rear of the cave. No sign of the ring, and no sign of recently turned earth. He discarded his gloves, placed them carefully to one side, and dug with a sharp rock.

No sign of the ring! The hours passed. What was he to do? His thoughts sharpened with desperation. An hour, little more, remained. Then would come the smash—and death.

He was in the cave! He, the skeleton!

He lay on his back, head propped up in locked hands. Trees and limbs and leaves hurtled by in a tempestuous wind. Soon, out in the sky, would float the remnants of this very substantial world. The millions of years would pass. A Lieutenant Tony Crow, on the trail of three criminals, would land here, look into this cave, and see his own skeleton—only he would not know it.

He lay there, tense, waiting. The wind would dig up the ring, whip it through the air. He would hear a tinkling sound. That would be the ring, striking against the wall of the cave. He would pick it up and put it on his finger. In a few moments after that would come the sound—the heavy vibration—the ear-splitting concussion—the cosmic clash—the . . . the . . . *bang* of a world breaking up. *Bang!*

He listened, waiting for the ring.

He listened, and heard a voice, screaming down the wind.

He impelled himself to his feet, in one surge of motion. He stood there, blood pounding against his temples, his lips parted and trem-

bling. There could be no sound like that. Not when he was the last human being on this world. Not when the scream could be that of Laurette Overland, calling to him.

Of course, it was not she. Of course, it could not be. This was merely one of those things previewing the preparation of a skeleton with a ring in a— *Stop!*

He moved from the cave, out into the wind, and stood there. He heard nothing—did he? A pound of feet —such as death running might make.

A scream!

He ran around the shoulder of the mountain, stood there, panting, clasping his helmeted head between his trembling, cold hands.

"Lieutenant!"

A voice, whipped into his imagination by the ungodly wind!

He would not believe it.

A form, stumbling out of the pale night! Running toward him, its lips moving, saying words that the wind took away. And it was Laurette Overland, forming in his imagination now that he had gone completely mad.

He waited there, in cold amusement. There was small use in allowing himself to be fooled. And yet—and yet—the ring had to come back; to him. This was Laurette Overland, and she was bringing it —for him to wear. That was selfish of her. If *she* had the ring, if *she* had dug it up, why didn't *she* wear it?

Then she would be the skeleton.

Then there would be two skeletons!

His mind froze, then surged forward into life and sanity. A cold cry of agony escaped him. He stumbled forward and caught the girl up in his arms. He could feel the supple firmness of her body even through the folds of her undistended pressure suit.

LAURETTE'S lips, red and full against the ghastly induced paleness of her face, parted and words came out. Yet he could make no sense of it, for the unimaginable wind, and the cold horror lancing through his mind occluded words and sentences.

"—had to . . . out. A hundred pounds." He felt her hysterical laugh. So the ship had started to fall. She had bailed out, had swept to solid ground on streams of flame shooting from the rocket jets in the shoulders of her suit. This much he knew. Hours and hours she had fought her way—toward the plain. Because, she remembered something. The ship was gone. Safe. She remembered something that was important and it had to do with the skeleton and the ring. She had to get out. It was her part in the ghastly across-the-millions-of-years stage play. She had to dig up the ring.

He held her out at arm's length and looked down at her gloved hands. Yes, there was mud on them. So the ring had not been in the cave.

His eyes shuddered upward to hers.

"Give me the ring." His lips formed the words slowly.

"No, no, lieutenant," she blurted out. "It's not going to be *that* way. Don't you see? It's Amos! Amos!"

"You must be crazy to have come back!" he panted. He shook in sudden overwhelming, maddening fury. "You're crazy anyway!"

He suddenly wrenched at her hands, forced them open. But there was no ring. He shook her madly.

"Where's the ring? Give it to me, you damned little fool! If you're wearing it—if you think for

one moment—you can't do this—"

The wind whipped the words away from her, she knew, even as that which she was saying was lost to him.

He stopped talking, and with a cold ferocity wrapped one arm around her, and with the other started to unbuckle her gloves with his own bare hands. She struggled suddenly, tigerishly. She wrenched herself away from him. She ran backward three steps. She looked up into the sky for one brief second, at the growing monster. He could see the cold, frantic horror settling on her face. Collision! And it was a matter of moments! And he, the true skeleton, did not have the ring!

He moved toward her, one slow step at a time, his eyes wild, his jaw set with purpose.

She darted past him. He whirled, panting, went frantically after her. And every step he took grew more leaden, for the moment was here. The collision was about to occur. And the girl was running toward the cave.

LAURETTE VANISHED around the shoulder of the mountain. The cave swallowed her. His steps slowed down. He stood there, drew a deep, tremulous breath. Then he entered the cave, and stood facing her, the wind's howl diminishing.

She said, coldly, "We haven't much time to talk or fight, lieutenant. You're acting like a madman. Here." She stooped and picked up his gloves. She held them out. "Put these on."

He said, "Give me the ring."

She stared at him through the gloom, at his preternaturally wide eyes.

"All right," she said. She unbuckled the glove of her right hand. She moved close to him, holding his eyes with her own. "If you want to be the skeleton, you may."

He felt her fingers touch his right hand. He felt something cold traveling up his fingers. He felt the ring inclosing his finger. Yes, the ring was on there, where it should be. He felt it—coldly. It could not very well be his imagination—could it? Of course not. She would not try to fool him. Yet her eyes were hypnotic, and he was in a daze. Feebly, he knew he should resist. But she forced his glove over his right hand, and he heard the buckles click. Then the left hand glove went on, and was buckled.

Her arms crept up around his neck. Tears glinted unashamedly in her eyes.

"Hold me tight, lieutenant," she whispered huskily. "You know . . . you know, there may be a chance."

"No, there isn't, Laurette. There can't be. I've got the ring on my finger."

He could feel her drawing a deep breath. "Of course—you've got the ring on your finger! I think it can't be very far away, lieutenant. Hold me." Her voice was a whimper. "Maybe we'll live."

"Not I. Perhaps you."

"This cave, this very mountain, lived through the holocaust. And perhaps we will, too. Both of us."

She was being illogical, he knew. But he had sunk into a dull, apathetic state of mind. Let her try to believe what was impossible. He had the ring on his finger. He *did*.

Did he?

He jerked. He had felt the cold of its metal encircling his finger. He had *thought* he had felt it! His fingers moved. A dull, sickening sense of utter defeat engulfed him. This was defeat. *She* had the ring! *She* was the skeleton!

And there was no time to change it. There would be no time. The blood rushed in his head, giddily. He caught her eyes, and held them, and tried to let her know in that last moment that he knew what she had done. She bit her lip and smiled. Then—her face clouded. Clouded as his thoughts clouded. It was like that.

He heard no monstrous sound, for here was sound that was no sound. It was simply the ponderous headlong meeting of two planets. They had struck. They were flattening out against each other, in the immeasurable second when consciousness was whipped away, and fragments of rock, some large, some small, were dribbling out in a fine frothy motion from underneath the circle of collision. The planet was yawning mightly. A jigsaw of pieces, a Humpty Dumpty that all the king's horses and all the king's men could never put together again. This was the mighty prelude to the forming of an asteroid belt, and of a girl skeleton on Asteroid No. 1007.

He was alive.

Alive and thinking.

It did not seem possible.

He was wedged into the back of the cave. A boulder shut off light, and a projecting spur of it reached out and pinioned him with gentle touch against the wall at his back. He was breathing. His suit was inflated with ten pounds of pressure. Electric coils were keeping his body warm. He was alive and the thoughts were beginning in his brain. Slow, senseless thoughts. Thoughts that were illogical. He could not even bring himself to feel emotion. He was pinioned here in the darkness, and out there was an asteroid of no air, small gravity, and a twenty-mile altitude.

Laurette Overland would be dead, and she would be wearing the ring. Tears, unashamed, burned at his eyes.

How long had he been here, wedged in like this: minutes, hours, days? Where were Overland, Masters, Braker and Yates? Would they land and move this boulder away?

Something suddenly seemed to shake the mountain. He felt the vibration rolling through his body. What had caused that? Some internal explosion, an aftermath of the collision? That did not seem likely, for the vibration had been brief, barely perceptible.

He stood there, wedged, his thoughts refusing to work except with a monotonous regularity. Mostly he thought of the skeleton; so that skeleton *had* existed before the human race!

After a while, it might have been five minutes or an hour or more, he became aware of arms and legs and a sluggishly beating heart. He raised his arms slowly, like an automaton that has come to life after ages of motionlessness, and pushed against the boulder that hemmed him in. It seemed to move away from him easily. He stepped to one side and imparted a ponderous, rocking motion to the boulder. It fell forward and stopped. Light, palely emanating from the starry, black night that overhung Asteroid No. 1007, burst through over the top of the boulder. Good. There was plenty of room to crawl through—after a while. He leaned against the boulder, blood surging weakly in his veins.

He felt a vibration so small that it might have been imagination. Then again, it might have been the ship, landing on the asteroid. At least, there was enough likelihood of

that to warrant turning his headset receiver on.

He listened, and heard the dull undertone of a carrier wave; or was that the dull throb of blood against his temples? No, it couldn't be. He strained to listen, coherent thoughts at last making headway in his mind.

Then:

"Go on, professor—Masters." That was Braker's voice! "We'll all go crazy if we don't find out who the skeleton is."

Then Braker had landed the ship, after escaping the holocaust that had shattered that before-the-asteroids world! Tony almost let loose a hoarse breath, then withheld it, savagely. If Braker heard that, he might suspect something. Whatever other purpose Tony had in life now, the first and most important was to get the Hampton away from Braker.

Overland muttered, his voice lifeless, "If it's my daughter, I'd rather you'd go first, Braker."

Masters spoke. "I'll go ahead, professor. I'd do anything to—" His voice broke.

Overland muttered, "Don't take it so hard, son. We all have our bad moments. It couldn't be a skeleton, anyway."

"Why not?" That was Yates. Then, "Oh, hell, yes! It couldn't be, could it, professor? You know, this is just about the flukiest thing that has ever happened I guess. Sometimes it makes me laugh! On again, off again!"

"Finnegan," finished Braker absently. "Say, I don't get it. This time business. You say the gravity of that planet was holding us back in time like a rubber band stretched tight. When the planet went, the rubber band broke—there wasn't that gravity any more. And then we snapped back to our real time. But what if Crow and your daughter weren't released like that? Then we ought to find the skeleton—maybe two of 'em."

"The gravity of the asteroid would not be enough to hold them back," Overland said wearily.

"Then I don't get it," Braker snapped with exasperation. "This is the present, our real present. Back there is the ledge that cracked our ship up, so it has to be the present. Then how come Crow said he saw a skeleton? Say," he added, in a burst of anger, "do you think that copper was pulling the wool over our eyes? Well, I'll be—"

Yates said, "Grow up! Crow was telling the truth."

Overland said, "The skeleton will be there. The lieutenant saw it."

Masters: "Maybe he saw his own skeleton."

Yates: "Say, that's right!"

Braker: "Well, why not? The same ring was in two different places at the same time, so I guess the same skeleton could be in Crow at the same time as in the cave. It's a fact, and you don't talk yourself out of it."

TONY'S HEAD was whirling. What in heaven were they talking about? Were they intimating that the release of gravity, when the planet broke up, released everything back to the real present, as if some sort of bond had been broken? His hands started to tremble. Of course. It was possible. The escapage of gravitons had thrust them back into the past. Gravitons, the very stuff of gravity, had held them there. And when that one and a half gravity had dispersed, when the gravitons were so far distant that they no longer exerted that tension, everything had snapped back—to the present!

Everything! His thoughts turned

cold. Somewhere, somehow, something was terribly wrong. His head ached. He clenched his hands, and listened again. For a full minute, there was no voice. Tony could envision them walking along, Masters and Overland in front, Braker and Yates behind, making their slow way to the cave, Overland dreading what he was to find there.

Then: "Hurry it up, professor. Should be right around here."

Overland whispered, throatily, "There it is, Braker. My God!" He sounded as if he were going all to pieces.

"The skeleton!" Yates blurted out, burs in his voice. "Ye gods, professor, d'you suppose— Why sure —they just weren't snapped back."

Shaking, pasty white of face, Tony clawed his way halfway up the boulder. He hung there, just able to look outside. The whole floor of the cave was visible. And the skeleton lay there, gleaming white, and the ring shone on its tapering finger!

Laurette.

He lifted his head, conscious that his eyes were smarting painfully. Through a blur, he saw Braker, Yates, Masters and Overland, standing about thirty feet distant from the cave, silent, speechless, staring at the skeleton.

Braker said, his voice unsteady, "It's damned strange, isn't it? We knew it was going to be there, and there it is, and it robs you of your breath."

Yates cleared his throat, and said firmly, "Yeah, but who is it? Crow or the girl?"

Overland took a step forward, his weak eyes straining.

"It's not a very long skeleton, is it?" he whispered.

Braker said, harshly, "Now don't try talking yourself into anything, professor. You can't see the skeleton well enough from here to tell who it is. Masters, stop shaking." His words were implicit with scorn. "Move over there and don't try any funny stuff like you did on the ship a while ago. I should have blasted you then. I'm going to take a look at that skeleton."

He went forward sideways, hand on his right hip where the Hampton was holstered.

He came up to the mouth of the cave, stood looking down on the skeleton, frowning. Then he knelt.

Tony could see his face working with revulsion, but still he knelt there, as if fascinated.

TONY'S LIPS stretched back from his teeth. Here's where Braker got his! He worked his way up to the top of the boulder, tensed, slid over to the other side on his feet. He took one step forward and bent his knees.

Braker raised his head.

His face contorted into a sudden mask of horror.

"*You!*" he screamed. His eyes bulged.

Tony leaped.

Braker fell backward, face deathly pale, clawing at the Hampton. Tony was on top of him before he could use it. He pinned Braker down, going for the Hampton with hands, feet, and blistering curses. His helmet was a sudden madhouse of consternated voices. Overland, Masters, and Yates swept across his vision. And Yates was coming forward.

He caught hold of the weapon, strained at it mightily, the muscles of his stomach going rigid under the exertion.

Braker kicked at Tony's midriff with heavy boots, striving to puncture the pressure suit. Tony was forced over on his back, saw Braker's sweating face grinning mirthlessly into his.

Stars were suddenly occluded by Yates' body. The man fell to his knees, pinned Tony down, and with Braker's help broke Tony's hold on the Hampton.

"Give it to me!" That was Masters' voice, blasting out shrilly. By sheer surprise, he wrenched the weapon from Yates. Tony flung himself to his feet as the outlaw hurled himself at Masters with a snarl, made a grab for Yates' foot. Yates tried to shake him off, hopped futilely, then stumbled forward, falling. But he struck against Masters. Masters' hold on the weapon was weak. It went sailing away in an arc, fell at the mouth of the cave.

"Get it!" Braker's voice blasted out as he struggled to his feet. Masters was ahead of him. Wildly, he thrust Braker aside. Yates reached out, tripped Masters. Braker went forward toward the Hampton, and then stopped, stock-still.

A figure stepped from the cave, picked up the weapon, and said, in cold, unmistakable tones.

"Up with them. You, Braker. Yates!"

Braker's breath released in a long shuddering sigh, and he dropped weakly, helplessly to his knees.

His voice was horrible. "I'm crazy," he said simply, and continued to kneel there and continued to look up at the figure as if it were a dead figure come to life at which he stared.

The blood drummed upward in Tony's temples, until it was a wild, crazy, diapason. His shuddering hands raised to clasp his helmet.

Then:

"Laurette," he whispered brokenly. "*Laurette!*"

There were six human beings here.

And *one skeleton on the floor of the cave.*

HOW LONG that tableau held, Tony had no way of knowing. Professor Overland, standing off to Tony's left, arms half raised, a tortured, uncomprehending look on his face. Masters, full length on his stomach, pushing at the ground with his clawed hands to raise his head upward. Yates, in nearly the same position, turned to stone. Braker, his breath beginning to sound out in little, bottled-up rasps.

And the girl, Laurette, she who should have been the skeleton, standing there at the mouth of the cave, her face indescribably pale, as she centered the Hampton on Braker and Yates.

Her voice edged into the aching silence.

"It's Amos," she said. She was silent, looking at her father's haggard face, smiling twistedly.

"Amos," said Overland hoarsely, saying nothing else, but in that one word showing his utter, dismaying comprehension. He stumbled forward three steps. "We thought—We thought—" He seemed unable to go on. Tears sounded in his voice. He said humbly, "We thought you were the— But no. It's Amos!" His voice went upward hysterically.

"Stop it!" Laurette's voice lashed out. She added softly, tenderly, "No, I'm not the skeleton. Far from it, daddy. Amos is the skeleton. He was the skeleton all along. I didn't realize it might be that way until the ship lifted. Then it seemed that the ship was going to fall and I thought my hundred and five might help after all and anyway, I decided that the lieutenant was all alone down there. And that somehow made me think of the time all the Christmas packages tumbled down on him and how I slapped him." She laughed unsteadily. "That made me remember that the university sent your present with a 'Do Not Open Before Christmas' sticker on it. I remembered you were leaving the university and they were giving you a combination farewell gift and Christmas present. You didn't know, but I did, that the professors decided you couldn't possibly be back before Christmas and so they sent it to the ship. You had always told them you admired —Amos. He hung on the biology classroom wall. It seemed I suddenly knew how things *had* to be. I put two and two together and I took a chance on it."

She fell silent, and the silence held for another full, shocking minute. She went on, as if with an effort.

"We threw everything out of the ship, remember? The Christmas presents, too. When I dropped from the ship later, I reached the plain and I broke open the carton with the 'Do Not Open' sticker on it, and there was Amos, as peaceful as you please. I put the ring on his finger and left him there, because I knew that some way the wind or crack-up or *something* would drop him in the cave. He *had* to turn up in the cave.

"Anyway," she added, her lips quirking roguishly, "by our time, back there, it was December 25th."

Masters clawed his way to his knees, his lips parted unnaturally.

"A Christmas present!" he croaked. "A Christmas present!" His face went white.

The girl said unsteadily, "Cut it out, Erle!"

She leaned weakly against the wall of the cave. "Now come up here, lieutenant, and take this gun out of my hands and don't stare at me as if you've lost your senses."

Tony forced himself to his feet, and like an automaton skirted around Braker and Yates and took the suddenly shaking weapon from her.

She uttered a weary sigh, smiled at him faintly, bemusedly, and whispered, "Merry Christmas, lieutenant!" She slumped slowly to the ground.

TONY GESTURED soundlessly at Masters. Masters, face abject and ashamed, picked her up in tender arms.

"Come up here, professor," Tony

said dully. He felt as if all the life had been pumped from his bones.

Overland came forward, shaking his head with emotion. "Amos!" he whispered. He broke in a half-hysterical chuckle, stopped himself. He hovered Laurette, watching her tired face. "At least my girl lives," he whispered brokenly.

"Get up, Braker," said Tony. "You, too, Yates."

Yates rose, vaguely brushing dust from his pressure suit, his lips working over words that refused to emerge.

Braker's voice was a hoarse, unbelieving whisper. His eyes were abnormally wide and fixed hypnotically on the skeleton. "So that's what we went through—for a damned classroom skeleton." He repeated it. "For a damned classroom skeleton!"

He came to his feet, fighting to mold his strained face back to normal. "Just about back where we started, eh? Well," he added in a shaking, bitter tone, "Merry Christmas." He forced his lips into half-hearted cynicism.

Tony's face relaxed. He drew in a full, much-needed breath of air. "Sure. Sure— Merry Christmas. Everybody. Including Amos—whoever he used to be."

Nobody seemed to have anything to say. Or perhaps their thoughts were going back for the moment to a pre-asteroid world. Remembering. At least Masters was remembering, if the suffering, remorseful look on his face meant anything.

Tony broke it. "That's that, isn't it? Now we can go back to the ship. From there to Earth. Professor—Masters—start off." He made a tired gesture.

Masters went ahead, without a backward look, carrying the gently breathing, but still unconscious girl. Overland stole a last look at the skeleton, at Amos, where he lay, unknowing of the chaos the mere fact of his being there, white and perfect and wired together, and with a ring on his perfect tapering finger, had caused. Overland walked away hurriedly after Masters. Amos would stay where he was.

Tony smiled grimly at Braker. He pointed with his free hand.

"Want your ring back, Braker?"

Braker's head jerked minutely. He stared at the ring, then back at Tony. His fists clenched at his sides. "*No!*"

Tony grinned—for the first time in three weeks.

"Then let's get going."

He made a gesture. Braker and Yates, walking side by side, went slowly for the ship, Tony following behind. He turned only once, and that was to look at his wrecked patrol ship, where it lay against the base of the mountain. A shudder passed down his spine. There was but one mystery that remained now. And its solution was coming to Tony Crow, in spite of his effort to shove its sheerly maddening implications into the back of his mind—

Professor Overland and Masters took Laurette to her room. Tony took the two outlaws to the lounge, wondering how he was going to secure them. Masters solved his problem by entering with a length of insulated electric wire. He said nothing, but wordlessly went to work securing Braker and Yates to the guide rail while Tony held the Hampton on them. After he had finished, Tony bluntly inspected the job. Masters winced, but he said nothing.

After they were out in the hall, going toward Laurette's room, Masters stopped him. His face was white, strained in the half-darkness.

"I don't know how to say this," he began huskily.

"Say what?"

Masters' eyes shifted, then, as if by a deliberate effort of will, came back.

"That I'm sorry."

Tony studied him, noted the lines of suffering around his mouth, the shuddering pain in his eyes.

"Yeah, I know how you feel," he muttered. "But I guess you made up for it when you tackled Braker and Yates. They might have been using electric wire on us by now." He grinned lopsidedly, and clapped Masters on the arm. "Forget it, Masters. I'm with you all the way."

Masters managed a smile, and let loose a long breath. He fell into step beside Tony's hurrying stride. "Laurette's O. K."

"Well, lieutenant," said Laurette, stretching lazily, and smiling up at him, "I guess I got weak in the knees at the last minute."

"Didn't we all!" He smiled ruefully. He dropped to his knees. She was still in her pressure suit and lying on the floor. He helped her to a sitting position, and then to her feet.

Overland chuckled, though there was a note of uneasy reminiscence in his tone. "Wait till I tell the boys at Lipton U. about this."

"You'd better not," Laurette warned. She added, "You broke down and admitted the ring was an omen. When a scientist gets superstitious—"

Tony broke in. "Weren't we all?"

Masters said, dropping his eyes, "I guess we had good enough reason to be superstitious about it." His hand went absently upward to his shoulder.

Overland frowned, and, hands behind his back, walked to the empty porthole. "All that work DeTosque, the Farr brothers, Morrell and myself put in. There's no reason to patch up the asteroids and try to prove they were all one world. But at the same time, there's no proof —no absolute proof—" He clicked his tongue. Then he swung on Tony, biting speculatively at his lower lip, his eyes sharpening.

"There's one thing that needs explaining which probably never will be explained, I guess. It's too bad. Memory? Bah! That's not the answer, lieutenant. You stood in the cave there, and you saw the skeleton, and somehow you *knew* it had existed before the human race, but was not *older* than the human race. It's something else. You didn't pick up the memory from the past—not over a hundred million years. What then?" He turned away, shaking his head, came back abruptly as Tony spoke, eyes sharpening.

"I'll tell you why," Tony said evenly.

His head moved up and down slowly, and his half-lidded eyes looked lingeringly out the porthole toward the mountain where his wrecked patrol ship lay. "Yes, I'll tell you why."

Laurette, Masters and Overland were caught up in tense silence by the strangeness of his tone.

He said faintly: "Laurette and I were trapped alive in the back of the cave when the two worlds crashed. We lived through it. I didn't know she was back there, of course; she recovered consciousness later—at the right time, I'd say!" He grinned at her obliquely, then sobered again. "I saw the skeleton and somehow I was too dazed to realize it couldn't be Laurette. Because when the gravity was dispersed, the tension holding everything back in time was released, and

everything went back to the present —just a little less than the present. I'll explain that later."

He drew a long breath.

"This is hard to say. I was in the back of the cave. I felt something strike the mountainside.

"That was my patrol ship—with me in it."

His glance roved around. Overland's breath sucked in audibly.

"Careful now, boy," he rumbled warningly, alarm in his eyes.

TONY'S LIPS twisted. "It happens to be the truth. After my ship crashed I got out. A few minutes later I stood at the mouth of the cave, looking at the skeleton. For a minute, I—remembered. Fragmentary things. The skeleton was—horror.

"And why not? I was also in the back of the cave, thinking that Laurette was dead and that she was a skeleton. The Tony Crow at the mouth of the cave and the Tony Crow trapped in the rear of the cave were *en rapport* to an infinite degree. They were the same person, in two different places at the same time, and their brains were the same."

He stopped.

Masters whispered through his clenched teeth, "Two Tony Crows. It couldn't be."

Tony leaned back against the wall. "There were two rings, at the same time. There were two skeletons, at the same time. Braker had the skeleton's ring on his finger. Amos was wrapped up in a carton with a Christmas sticker on it. They were both some place else. You all know that and admit it. Well, there were two Tony Crows, and if I think about it much longer, it'll drive me—"

"Hold it, boy!" Overland's tone was sharp. Then he said mildly, "It's nothing to get excited about. The mere fact of time-travel presupposes duplicity of existence. Our ship and everything in it was made of electrons that existed somewhere else at the same time—a hundred million years ago, on the pre-asteroid world. You can't get away from it. And you don't have to get scared just because two Tony Crows were a few feet distant from each other. Remember that all the rest of us were duplicated, too. Ship A was thrust *back* into time just an hour or so before Ship B landed here after being thrust *forward*. You see?"

Laurette shuddered. "It's clear, but it's—" She made a confused motion.

Overland's tired, haggard eyes twinkled. "Anyway, there's no danger of us running across ourselves again. The past is done for. That's the main thing."

Neither Laurette nor Tony said anything. They were studying each other, and a smile was beginning at the corner of Laurette's lips. Erle Masters squirmed uncomfortably.

Overland continued, speculatively: "There was an energy loss some place. We weren't snapped back to the real present at all. We should have come back to the present that we left, *plus* the three weeks we stayed back in time. Back there it was Christmas—and Laurette was quite correct when she broke open my package." He grinned crookedly. "But it's still more than three weeks to Christmas here. It was a simple energy loss, I guess. If I had a penc—"

Erle Masters broke in on him, coughing uncomfortably and grinning wryly at the same time. "We'd better get down to the control room and plot out our course, professor."

"What?" Overland's eyes widened. He looked around at the man and girl. "Oh." He studied them, then turned, and clapped Masters on the back. "You're dead right, son. Let's get out!"

"I'm glad you weren't Amos," Tony told the girl.

"I couldn't very well have been, lieutenant."

He grinned, coloring slightly.

Then he took her hands in his, and put his head as close to hers as the helmets would allow.

He said, "When we get back to Earth, I'm going to put a r—" He stopped, biting at his lip. Remembrances of another time, on a pre-asteroid world, flooded back with the thought.

She started, paled. Involuntarily, her eyes turned to the open port, beyond which was a mountain, a cave, a skeleton, a ring.

She nodded, slowly, faintly. "It's a good idea," she murmured. She managed a smile. "But not—an emerald."

THE END.

ANALYTICAL LABORATORY

The Laboratory results this time are based on rather early and somewhat incomplete returns, but the trend seems established. Apparently—from the tone of the letters as well as the actual votes cast—"Microcosmic God" was well liked, in a stiff competition. In any case, the point score stood:

	Story	*Author*	*Score*
1.	Microcosmic God	Theodore Sturgeon	2.12
2.	Stolen Dormouse (I)	L. Sprague de Camp	2.50
3.	Reason	Isaac Asimov	3.17
4.	Tied between:		
	The Mutineers	Kurt von Rachen	3.71
	Slackers Paradise	Malcolm Jameson	3.71
5.	Bird Walk	P. Schuyler Miller	4.20

THE EDITOR.

ARTNAN PROCESS

By Theodore Sturgeon

The people of Artnan had a process of extracting U-235—and a monopoly on atomic fuel in consequence. But—try and find that secret!

Illustrated by Schneeman

Slimmy Cob and his hair stood up short, tough and wiry. His eyes were slitted like his mouth, both emitting, from his dark face, thin lines of blue-white. "Blow!" he gritted, and his finger tightened on the trigger of the snub-nosed weapon he held.

The other man in the ship raised his face by making his pillar of a neck disappear into great hunched shoulders. I was afraid of this, he thought, and his fingers froze over the control panel. "Better put that toy away," he said softly.

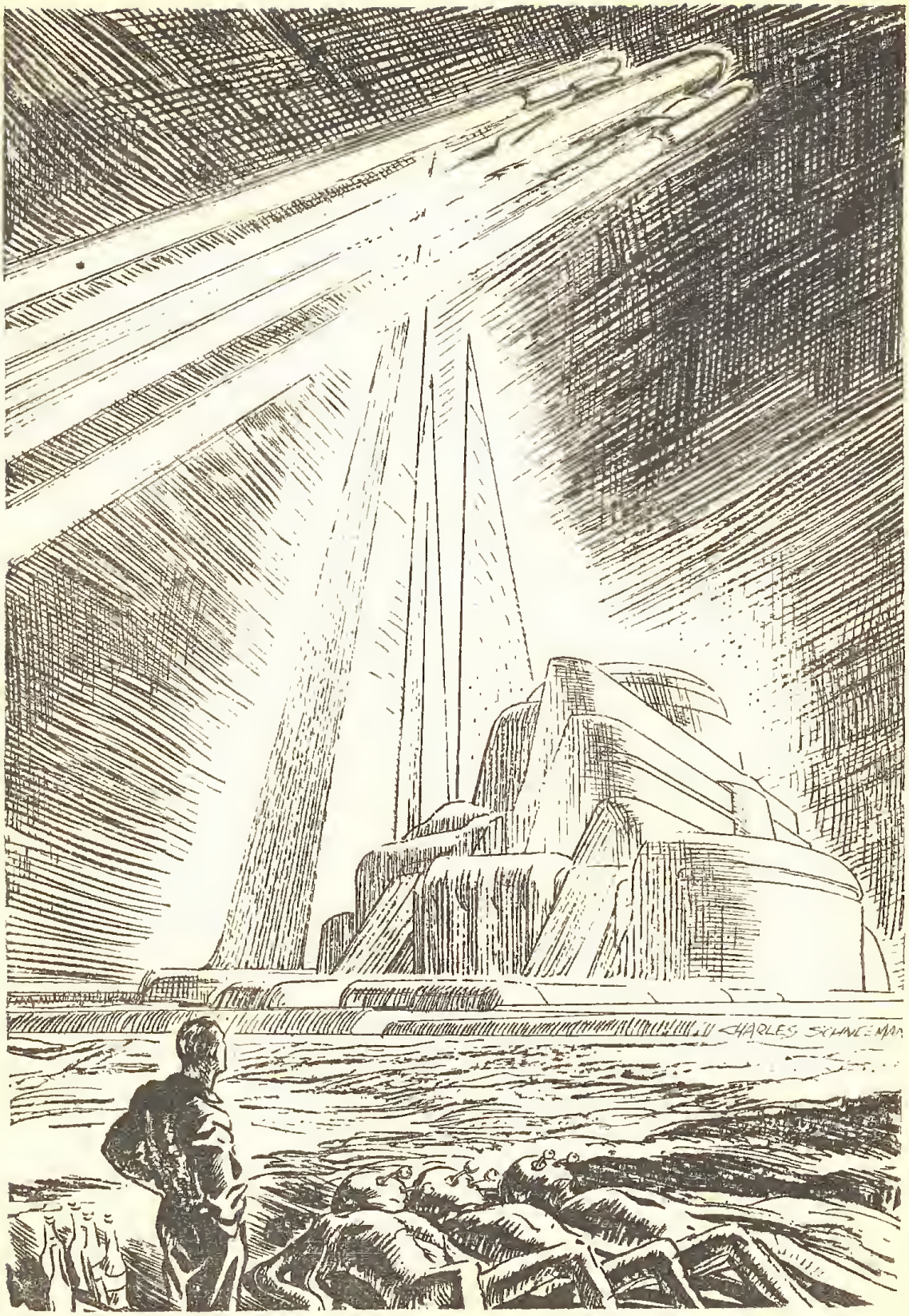
"I want a chance to unload it," said Slimmy, and he moved the muzzle coldly across the back of Bell Bellew's hairless skull. "And I'll sure get my chance unless you get out of that bucket seat and let me land the ship. Ain't kiddin', son."

Bell grinned tightly, jammed his knees into the recesses provided for them under the board, and with one dazzling movement threw two switches. The gravity plates under Slimmy's feet went dead and those in the overhead whipped the little man upward. He hung there, spitting and swearing like an angry kitten. Wrenching one pinned arm away, he aimed and fired. An opaque white liquid squirted downward, lathering the big man's skull, running down over his ears and eyes, down his neck. Bell swore chokingly, clawing at his face. He felt swiftly over the panel, his practiced fingers finding the right switches as if they were tipped with eyes. Slimmy fell heavily to the deck plates, and Bell pounced on him.

Great fingers wrapped themselves around Slimmy's throat, through which gasped the words, "Dammit! Why didn't I try to kill you outright instead of poisoning you?" His jaws champed, and his slot of a mouth closed as his slitted eyes opened wide and began to pop.

On the arid, shining planet below the silver ship, three naked, leather-skinned Martians crouched around a compact recording instrument, their implacably logical minds cubbyholing the above happenings. Their recorder, receiving by means of a tight beam vibration from the control room of the Earthlings' ship, showed in its screen every detail of the chamber, clearly sounded every word. A slight drift of the ship above moved it away from the spy beam, and the signals faded out. One of the Martians bent swiftly to the instrument while the others spoke in their high, monotonous voices.

"They are unaccountable as ever," said the first. His words were spoken syllable by syllable, with no emphasis on any of them, with no rise or fall of tone at the end of his



He watched the ship disappear, then turned to his job of keeping three drunk and helpless Martians thoroughly drunk and helpless—

sentence. The language of Mars is necessarily that way, since Martians are tone-deaf.

"It is beyond understanding," said the other, "that these two humans, who have come from the Solar System to this planet of Procyon, should have lived so amicably together until the day they arrive here on Artna, and then strive to kill one another."

"At least," said the first, "we have discovered their purpose in coming here."

"Yes. I trust that they will meet with no success."

"If they fail, they will have done no more than we have. The Artnans are far from hostile, but guard their secret closely. However, it seems reasonable to me to dispatch these Earthmen. Their presence here accomplishes nothing for us."

The third Martian turned the still-dead recording machine at this. "I would advise against that," he piped. "He," by the way, is a term of convenience. Martians are parthenogenetic, or self-germinating females. Variation of racial strains is accomplished by a periodic mutual absorption. "Earthmen, involved and unnecessary as their thought-processes are, have achieved a certain degree of development. Hampered by such inefficient and wandering mentalities, they could only have developed so far by possessing some unexplained influence over the laws of chance. Should that quality be used here, they might discover the secret we are after—how the Artnans produce U-235 so cheaply that they can undersell Martian and Terrestrial atomic fuel."

"There is reason in that," said the first Martian, than which there is no higher compliment to a Martian. "If we cannot discover the secret ourselves, we may conceivably sesure it from any who get it before us." He turned back to his machine, but to no avail. The little silver ship had disappeared over the horizon, and the Martian spy ray was strictly a sight-line proposition.

WHEN the blue began to show through Slimmy's tanned skin, Bell Bellew let go the little man's throat, took one wizened ear between each great forefinger and thumb, and began to rap on the deck plates with Slimmy's skull. A little of this, and the gun toter called it quits. Bell sat on his prostrate shipmate and grinned broadly.

"Get off," wheezed Slimmy. "I feel all crummy, lying under this big pile of—"

Bell put a hand under his chin and slammed the wiry head on the deck again.

"O. K.—O. K. You got me. Now what?"

"What was it you loaded that gun with?" asked Bell.

"Zinc stearate, lug, in an emulsion of carbohydrates and hydrogen oxide. I couldn't think of anything you needed more or liked less."

"Soap and water," nodded Bell. "Couldn't believe it, that's all, coming from you." He climbed off. "Enough horseplay, little one. We got to get to work. We're over the horizon, anyway. That spy ray of theirs won't see any more of this droy-ma."

Slimmy got his feet under him uncertainly, and shook his spinning head. "Now that we're here, what do we do?"

"We land as near as we can get to the Artnans' transmutation plant and see if we can get a gander at how they make U-235 out of U-238."

"You really believe they can do that?"

"They must. I used to think they mined it, but they don't. Artna has

an atmosphere much like Earth's, except that there's more xenon and neon and less nitrogen in the air. Also considerable water; and you know as well as I do that '235 can't exist where there's water."

"I dunno," said Slimmy. "The fact that they produce so much, so cheaply, is a contradiction in terms. Uranium is a little more plentiful here than it is on Earth, but it has less than Mars. And the ratio of '238 to '235 is 140 to 1, same as anywhere else. Damn, boy," he burst out suddenly, "won't it be something if we crack this racket?"

"Sure will," breathed Bell.

The simple words bore a weight of profound meaning, for in spite of their skylarking tendencies, Cob and Bellew never belittled the importance of their mission. Its history went back nearly five hundred years, to the ill-fated days when Earth first flung her pioneer ships out into space, to bring back their tales of other, older civilizations. They found the dead remains of the titans of Jupiter, and they brought back miles of visigraph records from the steaming swamps of Venus. But from Mars they brought undreamed-of power; a beam of broadcast energy from the old red planet that seemed inexhaustible. Earthmen were free to come and go; Earthmen saw the broadcasting towers that gave them their power, and the measureless stores of purest U-235 that fed it. The only thing they were not allowed to see was the plant which supplied the '235. Earth did not care much about that—why should they? They got power from Mars for a fraction of what it cost them to produce it themselves, so they took the Martian power and shut down their own plants.

Of course, there were one or two small rights which the Martians exacted in exchange—little matters concerning the rights to Earth's mineral resources, occasional requests to the effect that Earthmen must stop researches in certain directions, must prevent the publication of certain books, must limit their travel in certain directions—The edicts came far apart, and were applied with gentle and efficient firmness. Occasionally a group of Earthly hotheads would find reason to resent the increasing Martian influence. They were disciplined, usually by the greater mass of their own race, the hynotized sheep who blathered of "beneficent dictatorship"; who quoted interminably the Mars-schooled leader of men who burned his speeches into the souls of all—Hyatte Grove, who said, "To Mars we owe our power, our transportation, our every industry. To Mars we owe our daily bread, our warless, uneventful, steadily progressive lives. The Martian power beam is the beating heart of our world!"

EARTHMEN outnumbered Martians ten to one. Martians outlived Earthmen eight to one. The advantage was with Mars. The Martion conquest was applied without blood, without pain. There was no war of worlds, no great fleet of ray-equipped ships. There was just the warming, friendly power beam, and the great generosity of Earth's "Elder Sister." Generation after generation of men lived and died, and each of them was gradually led deeper into the slow-spun web of the red planet. Earth entered into a new era, one of passive peace, submission, slavery.

Some men knew it for what it was, and did not care. Some cared, but could think of nothing to do about it. Some did something about it, and were quietly killed. Most of

humanity didn't bother about what had happened. You were born and cared for. You grew up and were given a job. You were comfortable. Sometimes you were allowed to marry and have children, if it was all right with Mars. Married or single, there was room for everyone. When you were too old to be useful, you begged and were cared for by your fellows—that was easy, for everyone had so much. Then you died, and they dropped your carcass into the distintegrating furnaces. So what difference could it make whether or not man or Martian ran the show?

When man owned the Earth, you were told, he made a mess of it. No one killed now, or stole or broke any law. It was better. No one thought very deeply or clearly; no one had ambition, pride, freedom. That was better, too—for Mars. Mars grew fat on Earth's endeavor.

But some Earthmen didn't know when they were well off. They read the forbidden books, and studied the forbidden sciences, and most of them were killed off before they could add anything; but some did, and in a few centuries they had accomplished something. They knew these things:

Earth had a soul of her own, and they were determined to restore it to her.

Mars was the master—but Mars herself was a slave! And power had enslaved the red planet even as it had Earth. A thousand years and more before the first clumsy Earth ships had landed on Mars, Mars, too, had had great plants for the transmutation of '238 into '235. But one night an object was found on the Great Plain near the city of Lanamarn. It had appeared without a whisper; it was an irregular cylinder containing various simple objects—spheres, cubes, triangular and square plane surfaces of a tough alloy. Each was marked with a symbol. The Martians experimented with the things, drew some shrewd conclusions, and deposited other objects in the cylinder, replacing the cap. There was a shrill whine; on removing the cap again, the Martians found that their offerings had disappeared and were replaced by still other objects, each of which also bore a symbol.

After long and painstaking effort, a written language was established between Mars and the mystery from space which had sent the cylinder. The Martians learned that it had come from Artna, a planet of the Procyon system, and that the method of transmission was by way of the probability wave, a scientific refinement beyond the understanding of even Mars. It worked on the principle that matter cannot be destroyed; if it *is* destroyed in one portion of space, it must necessarily appear somewhere else. The transmission is instantaneous; as soon as it is negated at its source, it simply occurs at its destination.

And the Artnans had a proposition, to wit: Perhaps there was some little thing the Martians would like in return for the boron which showed up so strongly on the Artnan's teleospectrographs. The Martians sent out a sample of U-238 and asked if the Artnans could transmute it, in bulk, to U-235. The Artnans could, and did. They cheerfully sent plans for the construction of a tremendous plant on the plain. U-238 was dumped into hoppers, stored by machinery in bins deep in the heart of the apparatus, and disappeared. Elsewhere in the plans, pure '235 poured out in pulverized, greenish-black abundance.

So Martian transmutation plants shut down, and Mars used Artnan

atomic fuel exclusively. While boron was cheap, the arrangement was greatly to Mars' advantage. But the Artnans easily realized their advantage when they had cornered the power market, and they jumped the price. They kept it at just the level that would make it impossible for the Martians to reopen their own plants, until they had nearly exhausted the Martians supply of both uranium and boron. They would accept no substitute for the boron; Mars faced an extreme economic reversal when the fortunate fact of communication with Earth was established. Hence Mars' economic penetration of Earth's resources; and now, Mars could afford to sit back and enjoy her position. Earthmen slaved in the boron mines; cargo after cargo of Terrestrial uranium was freighted to Mars to feed the maw of the gigantic "transmutation" plant on the Great Plain.

ALL THIS was discovered by Earth's spies, the dozens who came back out of the hundreds of thousands that sought the information. In two centuries, nine attempts were made on Earth to design and build a ship which could travel to Procyon fast enough to spare its crew the misfortune of dying of old age before the ship reached there. Eight crews of workers were discovered and killed or dispersed, put to work in the mines by wandering, gently thorough Martian investigators. The ninth ship got away—a physical impossibility, as the Mars-hating element on Earth freely admitted. Mars gave them no permission to build and launch the little silver craft; but the Martian investigators stretched probability and did not discover the hidden factory.

Perhaps it was purposeful. Perhaps Mars was curious to know whether Earthmen could find the secret of Artnan transmutation. Mars couldn't. Even now that they had Earth's vast resources at their disposal, the Martians would be happy to free themselves from the Artnan monopoly of transmutation. They remembered with bitterness the carefully outfitted body of men who had entered the transmission chamber and had gone to Artna via the wave, in place of a scheduled cargo of boron. The Artnan, with their next shipment of '235, included the six-legged, two-foot-long body of an Artnan and a polite note thanking the Martians for the inclusion of the *corpses!* and expressing regret that no living thing could traverse space time via the wave; also a reminder that the latest boron shipment was slightly overdue.

All of which flashed through Bell Bellew's mind as he stood beside Slimmy Cob and stared down at Artna. It had been a long trip—three years or so, even with the slight space warp stolen by workers in Martian shipyards. But Slimmy was good company, even if he did prefer horsing around to anything else in the world. They had both been picked for that quality, among many others. The reason was that the Martian mind is completely without humor, and the less Martians could understand the two men, the better it would be.

"Do you see what I see?" asked Slimmy after a long moment.

Bell followed the little man's pointing finger. Down in a hollow, nearly invisible from above, lay the squat shape of the Martian space cruiser.

"I do. I wouldn't worry about that, Slimmy. I expected that they'd be here."

"Why?"

"As I told you—I don't think it was just luck that got this ship off

Earth and out of our System. I think the Martians let us."

"Yeah." There was disbelief in Slimmy's voice. "The Martians have always treated us that way—let us do as we pleased, when we pleased. Wipe the rest of that soap off, Bell; it's addled your brain."

Bellcw gave Slimmy a playful pat that brought him up against the opposite bulkhead, and went back to the controls. "Let me know when you sight anything that looks like the Great Plain transmutation plant," he said. "We can start from there."

The planet was but slightly larger than Earth, with an astonishingly smooth topography. There were no mountain ranges, and yet there were no true plains. The whole planet was surfaced with small rolling hillocks. Most were sandy; there was little vegetation. The Artnans, whose metabolism was a mineral ore, had no agriculture.

After an hour or two Slimmy grunted and came away from the forward observation port, and switched on the visiplate, tuning in the buildings he had spotted. "There she be, cap'n," he said.

Bell studied the great pile of alloy. "You got to give credit to those Martians," he said. "They certainly built theirs the spit an' image of this one."

"Not quite," said Slimmy, swinging the range finders. "Look there—see that . . . that— What is it, anyway?"

"Sort of a shed," said Bell. "One flat building, not more than three feet high, and all of ten miles square!"

A warning signal pinged, and their eyes swiveled toward it. A yellow light blinked among the studs on the panel. "Vibrations," gritted Bell, and put a thousand feet of altitude under them so fast that he heard Slimmy's kneecaps crackle. They circlcd slowly over the shed, feeling carefully ahead of them with delicate instruments, and charted the hemisphere of tight-knit waves that roofed the flat structure.

"What is it?" asked Slimmy.

"Dunno. Let's sit down and see if we can find out."

The ship settled down gently, her antigrav plates moaning. Bell followed the curve of the vibration field at a safe distance, and came down in a depression a hundred yards from its invisible edge.

"Air O. K.?"

"Sure," said Slimmy. "Just like home. Temperature's just under blood heat. Come a-walkin'!"

THEY STRAPPED ON side arms and went out, using the air lock for safety's sake. There didn't seem to be anything noxious in the air, but if there were, it might be smart to leave it outside the ship. Taking a bearing on a peculiar vegetation outcropping similar to scrub oak, they bore off toward the shed, both trying vainly to conceal the fact that they felt like a couple of kids let out of school. Three years is a long time to be cooped up in a small spaceship. Slimmy said in an awed voice that his legs didn't believe him, it was so long since they had walked more than twenty feet without turning a corner.

They topped a rise and stood a moment looking at the shed. It was barely visible from the ground, and there wasn't a sign of life anywhere about.

"Wonder why the sand don't drift over the thing," said Slimmy.

"This might be why," Bell grunted. He was staring at a line in the sand across their path. On

their side of it, the sand puffed and tumbled in the light breeze. Toward the shed, however, there was apparently no moving air. "See that line? Unless I'm 'way off my base, that's the edge of the vibration field." He scooped up a handful of sand, stepped cautiously close to the line and tossed it. The sand fanned out, drifted over the line and—disappeared.

Slimmy tried it for himself before he commented. "I would gather," he said dryly, "that the Artnans would rather not have anyone look into that shed."

"Something like that," said Bell. "Look!" The crest of a nearby dune detached itself and scrabbled on six scrawny legs toward the line. It shot between the startled Earthmen, over the line, and almost to the low wall of the shed before it turned up its pointed tail and burrowed quickly under the sand.

"What was that?" asked Slimmy.

"An Artnan, from what I've heard."

"Nasty little critter," said Slimmy. "Hey—the field didn't seem to bother it any, Bell."

"So I noticed. Seems that the field has been set up for the benefit of you and me. And maybe even for our Martian friends over there."

As they turned back toward their ship, Slimmy said pensively, "What we just saw is justification for the Laidlaw Hypothesis, if it makes any difference to you."

"What do you mean?"

"Speaks for itself, doesn't it? Laidlaw said that the inhabitants of any Solar System have a mutual ancestor, parallel evolutions, and similar metabolisms. You know yourself that Martians, Earthmen, Venusians and the extinct Javians are all bipeds composed mainly of hydrocarbons. That field was set up to keep such molecular structures out. The sand here is apparently something of the sort. The Artnan who ran through

the field was something different. We'll catch us one sometime and find out just what makes him tick."

"Yeah. You got something there. What interests me, though, is what's in that shed. If we guessed right about who it was put up for, then the shed must cover something they want to keep Solar noses out of. Ah—it wouldn't by any chance be what we're looking for, would it?"

Slimmy's eyes glowed. "The transmutation plant? Could be, pal; could be. It's adjacent to the Prob.-wave transmitter. It's screened against Earth or Martian interference."

"Huh!" Bell ran a thick forefinger up behind his ear. "We got a problem here, little man. We toss ourselves through nine-odd light-years of space and wind up flat-footed in front of a killer-wave thrown up around a cubist's idea of a beanfield. I sort of expected a city—machinery, people, maybe."

"It's not simple," said Slimmy. "Howsomever, let's see if you can make your brains go where your flat feet fear to tread. Let's go to work on the Martians. From the looks of things, they've been messing around here for quite some time."

"Want to go right to work, don't you?" grinned Bell. "Always wanted to get a Martian alone away from his playmates so you could tie a half hitch in his eye stalks! O. K., buddy—where do we find us one?"

"If I know Martians, there ought to be a couple sniffing around our ship by this time."

There were.

THEY were lined up in front of the air lock, their spare bodies quivering with the palpitation peculiar to their race, and with their eye stalks pointing rigidly toward the approaching Earthmen, points together, in the well-known Martian cross-eyed stare. They had, of course, sensed the body vibrations of the men quite some time ago; the very fact that they were there meant that they were ready for a showdown.

"Hi, fellers," said Slimmy laconically, flipping the butt of his atomic gun to make sure that it was loose in the holster.

"What are you doing here?" piped the Martian on the right.

"We're rick-bijitting for a dew-jaw," said Slimmy immediately. He had studied the masterworks of the ancients in his extreme youth, and this was a little something he remembered having seen under the heading, "Double talk."

"Yes," said Bell, taking the cue. "We willised the altibob, and no sooner did we jellik than—*boom!* here we are."

The Martians regarded them silently. "You do not tell the truth," one of them said.

"It ain't a lie," Bell dead-panned.

The evasion served its purpose, for to them, anything that was not a lie was the truth, and vice versa. Their hearing apparatus was partly sensitive to air-vibration and partly telepathic. Bell's last statement was the truth and they knew it was the truth; that convinced them. They'd die before they admitted they didn't know what the men were talking about.

"What are *you* doing here?" Slimmy countered, before their machinelike minds could work on the problem.

The Martians stiffened. "It is not for you to ask," said one of them.

"Aw, don't be like that, son," drawled Bell. "Haven't Martians always told Earthmen that Mars takes only its just due, and does nothing for Earth but good?"

"Yeah," said Slimmy. His inflec-

tion was drawn-out, lowering, and meant "That's a lot of so-and-so!"

But to the Martians "Yeah" meant "Yes," and that was that. "Why should things be different here? You don't have to hide the fact that you're looking for the same thing we are; maybe we can make a little deal."

"Sure—come in and set awhile!" Bell pushed past the Martians and unlatched the air lock. He knew that turning his back on the enemy was bad tactics, but it was good diplomacy. Besides, fast on their feet as Martians were, no one in the Universe could draw, aim and fire faster than little Slimmy Cob.

Slimmy walked around the Martians, not between them, and sidled into the ship. He apparently faced the Martians merely to talk to them. "Sure—come on in. Maybe we can give each other a hand. We can decide later what to do if we get the information we're after."

Three sets of eye stalks intertwined briefly, and then the three spindly Martians bent and entered the silver ship.

THE MARTIANS squatted in a row against the starboard bulkhead, sipping Earth's legendary cocola through glassite straws and coming as near to a feeling of well-being as was possible to these unemotional logicians. Slimmy's sharp eyes had noticed that one of them was taller than the others, the second taller than the third. Knowing that Martian names, being in the semi-telepathic Martian language, were unpronounceable to humans, he had dubbed them Heaven, Its Wonders, and Hell.

"Have another coke," said Bell heartily.

Its Wonders passed his empty flask. Bellew flashed a glance at Slimmy, and Slimmy nodded. The Martians were getting nicely mellow; a carbonated drink plasters up the Martian metabolism with amazing efficiency. Intoxication, however, is not befuddlement to a Martian. It merely makes him move slower and think faster. If he drinks enough, he will stop altogether and turn into a genius for an hour or so. The idea of gassing the Martians up was to disarm them as to the human's motives; for they knew that no human would dare to try to pull the wool over a drunken Martian's eyes.

The Martians accepted the drink as a gesture of good faith, for they knew that they would soon be unable to navigate. It was the pipe of peace between them, with the Earthmen paying the barkeeper, which was the way any deal with Mars seems to work out. So when the pale-blue flush began to blossom across their leathery hides, Slimmy went to work on them.

"Look fellers," he said bluntly, "there's no sense in our cutting each other's throats for a while yet. If you've guessed what we're here after, you've probably guessed right. We know that Martian '238 isn't transmuted into '235 on Mars. We know its' done here, in that flat building under the killer field over there. All we want to know is how it's done, and whether or not the method can be used in our System."

"What has that to do with us?" asked Hell.

"I'll take the question as a feeler," Bellew cut it. "You want to find out how much else we know. All right. We know that more than half of Terrestrial and Martian industry is being diverted to the production of boron to pay for the Artnans' processing of '238. We know that Martian domina . . . er . . . control

of the Solar System won't be complete unless and until the Artnan process of transmutation is made the property of Mars; for every indication shows that the cost of the Artnan process must be practically nothing. We know that the Martian Command did not have the process when we left the System three years ago, and we know that you don't have it yet because we wouldn't have found any Martians here if you had."

Heaven said, "What do you want to find the process for?"

"I might say that we of Earth would like to return to Mars some of the many kindnesses she has done us," said Slimmy around the tongue in his cheek. "And I might say that its none of your damn business. I'll do neither, and simply say that I won't insult your intelligence by considering the question."

THREE sets of eye stalks fumblingly sought each other out and, intertwining, connected their owners in a swift, silent conference. Coming out of the huddle, Heaven addressed the humans. "We have certain information bearing on the matter in hand. How can we be assured that it will be to our benefit to share it?"

Bell answered that. "I've no idea how long you've been here, but it seems as though you haven't got on the right track yet. I don't know whether we'll be able to find the process with your information and our brains. If we can, well and good. If we can't, what have you lost?"

"We will share it," decided Its Wonders instantly. "All we know is this: The Artnans are a race totally unlike anything in our System. They have a mineral metabolism, feeding on ores and excreting sulphides. Their culture is beyond our understanding; they seem beyond the reach of Solar reasoning. They have made no attempt to drive us away from the planet. They have also made no attempt to communicate with us, in spite of the fact that they must know we are Martians and that it is with Martians that they trade. The vibration field around the transmutation plant cannot be penetrated by anything but light; it even excludes a spy ray. There is no way of estimating the extent of their science or their civilization. They exist mainly underground; for all we know, this may be an artificial planet. There is a possibility that their science is no more advanced than ours, but that it has simply progressed along other lines. The trade with Mars may be a major or a very minor industry with them. It is completely impossible to tell. That is all we have been able to discover."

"That might help," said Bellew, "and it might not. We'll work on it. Now. There's one more little point we have to take care of. How can all concerned be sure that there is no dirty work? How do we know that we will not be killed if we get the secret; how do you know that we will not kill you for it if you beat us to the gun?"

"We can promise," said Its Wonders in his spark-coil voice.

"Won't do, chum," said Slimmy. "No reflection on you, but in spite of the fact that a Martian has never been known to break his word, we don't want you establishing precedents. Bad for the racial morale. Got any other ideas?"

Bellew sometimes wished that Martians could add inflection, voice control, to their speech. You couldn't tell whether they were sore, happy, insulted—anything. He

shook his head quickly at Slimmy—the little man was pushing things a little.

However, Its Wonders didn't seem annoyed by the refusal of his word. "We could," he said, "destroy each other's weapons."

"Would you agree to such a proposition?"

"Yes," chorused the three Martians.

Bellew thought fast, then drew Slimmy aside. Not wanting to risk being overheard—no one has ever figured out just how much a Martian hears by telepathy, but it is certain that they can get nothing unless it is accompanied by the spoken word—Bellew took down a cellotab and stylus and wrote swiftly:

"Those guys are really hard up, if they'll go to those lengths. What do you think?"

"It's a good idea. Let's do it."

"It's taking an awful chance. We can ruin their guns but no human can outrun or outwrestle a Martian."

"We'll leave that to our brains and our ship."

Bellew looked at Slimmy for a long moment, then turned to the Martians. "All right, fellers. We'll do it. I think that once that's taken care of we'd do better to part company. We'll operate our way and you do anything you want to. I think the best way to handle it is to have one of you stay here with Bellew and check over our armament. I'll go over your ship with the other two and take care of yours. We'll blast away all the artillery with side arms and then pitch the pistols into the Artnans' killer field."

"Wait!" snapped Slimmy. "This here-is-my-hand-my-brother stuff may be on the up-and-up, but not when it separates us."

"Don't worry about that, chum," said Bellew. "While friend Hell here is wrecking our guns, you've still got your little bean shooter. Besides, these lads need us. We'll meet you in two hours by the killer field with a bushel or two of side arms. In the meantime, take care of yourself." Waving to the two silent Martians, he led them out.

Once they were together again in their emasculated ship, Slimmy and Bell compared notes.

"What's their ship like?" Slimmy wanted to know.

"Smooth," said Bell. "An Ikarion 44, with all the fixin's. Got that old-style ether-cloud steering for hyperspace travel, though—you know—the one that builds etheric resistance on one bow or the other to turn the ship when she's traveling faster than light? We can outmaneuver them that way if it comes to a chase."

Slimmy grinned ruefully. "Not so you'd notice it, chum. Hell spent a long time dismantling our bow gun and blasting the pieces one by one. Don't you fret—he had to crawl up through our steering gear to get to it, and you know Martians have photographic eyes. That bootleg ether-rudder of ours is so perfect because it's so simple, and it's the easiest thing in the world to adapt to an Ikarion. How's their spatial steering?"

"Same as ours," answered Bell. "We better find us some good luck some place. By the way—remember what Its Wonders said about the killer field's stopping a spy ray. That was a slip on his part. I got looking for one when I was busting up their big guns. They have one, sure enough—a neat little portable, sound and viviscreen; and I'll bet my back teeth it records. We got to watch our mouths."

"Yeah." Slimmy walked over and drew himself a flask of cocola, then

came and sat on his bunk next to Bell.

Bell was surprised to find that on the way Slimmy had snatched up the cellotab and stylus. He took it, shielded it closely, and began to write as he talked about the Martian ship. In a few minutes he passed the tablet to Slimmy. It read:

"A laugh for you. Heaven and Its Wonders no sooner got out of here when they began to pump me about why you'd tried to kill me just before we landed. We were right; they saw you shooting me with the water pistol and it threw their mental reactions into six speeds at once. Couldn't understand why you didn't kill me or why I didn't kill you for trying. Suggested that if I wanted to slip you the double-x, they'd see to it that you were killed. Gave me a phial of Martian paralysis virus. Told me that if we found the Artnan secret, if I killed you with the virus I'd be protected when they brought me back to the System."

"Yep," said Slimmy aloud as he reached for the stylus, "them Martians are certainly nice fellers."

Bellew motioned to Slimmy to duck the cellotab, winked, stretched and said, "You think we ought to grab some sleep?" in a voice dripping with exactly the opposite meaning.

Slimmy said, "Why, sure," with admirable promptness, considering that both of them had had the sleep-centers removed from their brains by outlaw Earth surgeons in preparation for the trip.

WHILE Slimmy pulled off his shoes, Bell went to a locker and slid two pairs of thick spectacles under his tunic, along with two disks of the same material as the lenses. He switched off the lights, pulled his own bunk out from the bulkhead over Slimmy's, dropped a pair of spectacles and a disk on the little man's chest, and rolled into bed. Both men clipped the disks to their bunklights, switched them on, and donned the glasses. Martians, possessing vision far into the ultraviolet, are blind to the reds merging into the infrared which is so prevalent on their own planet. If the spy ray was functioning—and of course it was—all the screen showed was a lot of nothing on a background of the same, and all the amplifier picked up was the tiny whisper of a busy stylus.

"Been thinking about those Artnans," wrote Bell. "What do you suppose is the reason for their building that transmutation shed on the surface of the planet if their civilization is underground?"

"To be near the transmitter, I'd imagine. For as I know, a probability wave can't operate below ground."

"Seems likely. What's your guess about the process?"

"That, bud, is our little stymie. The Martians have tested the ground right clear up to the edge of the killer field for vibrations from machinery. They heard the footsteps and the burrowing of the Artnans, and the noise from the Prob.-wave transmitter and receiver. But that's all. Artnan workers—not more than eight or ten at a time—tend whatever's in that shed. Now and then a blast of artificial wind rushes through the shed. Right afterward big suction intakes gather up a powdery material and collect it in the hoppers which feed '238 into the transmitter. Then the wind blasts back with a slightly heavier powder. There's also a little vegetative sound—spores popping and whatnot, but our Martian friends don't know whether there is some

plant life in the shed or whether the vibrations come from the flora outside. That's a lot of info to get from ground vibrations, but you know Martian detection instruments."

"Wonder what the Artnans do with the boron they get from Mars?" Slimmy wrote after a silent interval.

"Eat it, I guess. For all we know, the whole set-up that has made Earth a slave and put Mars on the economic rocks may be just a side line to the Artnans. Maybe it's candy to them, or a liquor industry. That's something we'll never know as long as the Artnans act so unsociable."

"They don't behave like an outfit that's trying to keep a monopoly," Slimmy scrawled. "Seems to me their very treatment of us and the Martians is their way of telling us, 'We found the process. If you want to dig it up for yourselves, go to it.' They don't seem to give much of a damn whether we do or not."

"Seems sound enough. I wish we could get some slant on their psychology. Their reasoning is so absolutely alien to anything we have in our System. Old Laidlaw was right."

Bell handed this to Slimmy and then snatched it back excitedly. "*The Laidlaw Hypothesis!*" he underlined. "That's the answer! Laidlaw said that each Solar System had civilizations and cultures with a common ancestor, which ancestor was peculiar to the System. For that reason there is no way of predicting in what direction a new system's fauna will evolve. The Artnans are mineral eaters, right? Then, according to Laidlaw, their plants have a corresponding metabolism, and so has every other living thing in the system! Do you see what I'm getting at?"

"No," said Slimmy aloud, forgetting himself. Bell snatched the pad and belted the little man's mouth with it before he wrote:

"It isn't an apparatus process, dope! The Artnans don't transmute '238 into '235 by electrochemistry or radiophysics or any other process we ever heard of! Those Artnans who work in the shed aren't scientists or even mechanics! They're *gardeners!*"

"Plants?" Slimmy's amazement dug the stylus deep into the cellotab. "How can plants transmute one isotope into another?"

"An Artnan might like to know how an Earth plant can change light and water and minerals into cellulose," wrote Bell. "Now; plant or mold or fungus—what sort of a place might it come from?"

"Not here," was Slimmy's prompt reply. "The atmosphere is slightly humid. Water and pure '235 don't mix. Any plant that gave off atomic fuel that way would blow itself from here to Scranton. It must have been brought here from an airless planet or satellite too hot or too cold for water to exist."

"Is there such a body in this system?"

In answer, Slimmy rolled out of his bunk and went to the chart desk, returning with a sketched astro map of the system.

"Two," he wrote on the edge of the chart. "This one"—an arrow indicated a large planet far away from the double sun—"and this peanut here. A ninety-six-day year, son, and it's hot. I mean, but torrid. Don't tell me anything from there could live here, if at all."

"Might, if it's a mold or a bacterium. Temperature wouldn't make much difference to a really simple metallic mold. It's worth a try. How do we get out there without taking our three little playmates with us?"

They thought that over for a while, and then Slimmy giggled and wrote, "Buddy, I feel an awful attack of Martian paralysis coming on!"

Bell snapped his fingers, lay back in his bunk and roared with laughter.

HEAVEN, Its Wonders and Hell squatted excitedly before the portable spy-ray set in the center of their control room, watching the scene it pictured. Slimmy's head protruded from a small iron lung built into the bulkhead, and his head was stretched back so far that the skin on his neck seemed on the breaking point. His face was bluish; there was a thin line of foam on his lips, and his breath whispered whistling through the annunciator.

"Traitorous creature," piped Its Wonders. "He has taken our advice and inoculated his companion with the disease."

Heaven waved his eye stalks. "He would not have dared to do it if he had not secured the information we seek."

"How could he?" asked Its Wonders. "We have taken relays on the spy ray; one of us has been watching the ship constantly. They have not left it, nor have they used any instruments."

"Their faulty logic," said Hell, "has probably led them to deduce the correct answer. I have remarked before that Earthmen seem to have an astonishing ability to distort the laws of chance to their own profit."

"It is certain that they have the secret," said Its Wonders, "for otherwise the large one would not have attempted to dispatch the other. Where is that Earthman, anyway?"

A loud *thuck! thuck!* answered his question, as Bell Bellew banged on the insulated gate to the Martians' air lock. Heaven reached out a long, jointless arm and pressed a panel; the door opened.

"Hey," Bell roared before he was well into the room, "you guys better come a-runnin'. My partner's went and got himself some Martian paralysis and he can't last much longer." Bell permitted himself a leer.

"What has that to do with us?" Heaven wanted to know.

"Everything. He has the secret of the Artnan process. His voice is gone now; all he can do is gurgle. I ain't telepathic; you are. His gurgles ought to make some sense to you."

"You stupid primitive," squeaked Its Wonders. "What do you mean by inoculating him and endangering the secret? If he dies with it, we may never discover it!"

Bell looked sheepish. "Well, it was this way," he said. "Slimmy figured it all out. Said it was simple once you got the idea—one of those things that's so evident you can't see it. I asked him what it was. He wouldn't say. Said he'd tell me if his life was in danger, but not before. It was too dangerous for both of us to know. I got to thinkin'. If we got back to Earth with the secret, we'd have no chance of keeping it from Mars. Mars would take the process and kill us for our pains. Why should I get myself killed? If I tied in with you, I had your promise of protection. So I slipped him the virus, thinkin' he'd tell me the process when he knew what was the matter with him. But it hit him too fast. I can't understand a word. Come on—he may be dead before we get there!" So saying, the big Earthman turned and bolted out of the Martian ship.

The Martians held a shrill consultation and then took out after Bell, their thin claws eating up the distance. Bell was running with every-

thing he had, but the Martians passed him before he had gone an eighth of the way. They were not even breathing hard.

MARTIAN PARALYSIS is sure death to the people of the red planet. When Bell got to the ship he found the three Martians pressing as close to Slimmy as they dared, which was about five feet. They were straining to hear what Slimmy was mumbling, and started annoyedly when Bell burst in.

"Get away from him," Bell wheezed. "Dammit, now you'll never get the information. He'd die before he'd tell it to a Martian."

"Be quiet!" snapped Hell. He is too far gone for that. The paralysis strikes first at the eyes, then at the hearing. He doesn't know who is here."

Slimmy's tortured voice broke from moans into words. "Bell . . . process . . . electrolization of . . . dying, I guess . . . lousy Martian . . . process . . . electrolization of—" Suddenly he made a tremendous effort, lifted his head, and said in a perfectly normal, conversational tone, "We're rikbijitting for a dewjaw." Then his head snapped back and he lay still.

Bell blundered over to the after bulkhead, ripped open the cold locker, and tossed three flasks of cocola to the Martians. "Drink up," he snapped. "You're going to need all your brains from now on if you're going to savvy *that*." He waved a hand toward Slimmy, who was babbling busily away about willising an altibob. The Martians sucked away eagerly at the frothy liquid, willing to do anything that would sharpen their senses.

So Slimmy muttered and the Martians guzzled, and in forty minutes Bell stopped passing out cocola and went to the iron lung and opened it, and Slimmy climbed out, rubbing

his neck and cussing softly.

"That was a long haul, Bell," he complained.

"You did fine, kid," said Bell. "I must remember to slip you the real thing sometime."

"What are we going to do with these disgustingly intemperate creatures?" asked Slimmy, indicating the Martians.

They were propped up against the bulkhead, limp eye stalks registering their impotent rage. They were absolutely helpless, though their implacable brains were clicking away like high-speed calculating machines. They saw it all now.

Bell thought, and snickered: "You stick around and watch 'em. I'm going to take a ride. I'll leave fifty gallons of coke with you. They're too plastered to keep you from opening their ugly faces and pouring more coke in. Don't let them sober up. Just keep telling them that they'll drink it or you'll drown them in it."

Together they lifted the limp bodies and dropped them in the sand outside the ship. "We ought to knock them off," said Slimmy.

"I thought of that. But if you could see farther than your excuse for your nose, you might remember that we have nothing but a shrewd guess as to the accuracy of our idea about the process. If we're wrong, these guys might come in handy again."

"Anything you say," said Slimmy reluctantly. "I'll take good care of them until you get back. After that, I can't promise. Take care of yourself, incidentally."

"Worry not, little man. Ought to be back inside of fifty hours. So long." He slapped Slimmy's back and dove back into the ship.

The port closed with a clang, and the silver ship rose, circled twice, and dwindled to a point before it slipped under the horizon. Slimmy looked after it longingly and then turned to the helpless Martians.

"Time for your bottles, babies," he said, and went to work pouring the cocola into their gullets.

BELL FOLLOWED the plane's surface until he was sure he was out of sight of the drunken Martians, and then curved up and away into space. As soon as he was out of the planet's effective space warp, he slipped into hyperspace and traveled toward Procyon and its dark companion at many times the speed of light. Watching his chronometers closely, he spun dials and flipped switches in each phase of acceleration and deceleration, and then went spatial again not two thousand miles from the inner planet. In spite of the almost perfect physical insulation of the craft, it was already growing warmer in the control room. Bellew set up a small warp around the ship to convert the heat into light that could be sent back toward the twin suns, and then began circling the planet. Delicate instruments felt into the depths of every crater, every boiling sea of rock on the hot little world. Bell let the ship fall into an orbit, and with one eye glued to a teleo-spectrograph and the other to his detector instruments, he searched every inch of area as it passed beneath him. The hunt didn't take long—there was uranium aplenty down there. There were great pits of U-236 and '37, something he didn't know existed in the Universe, so rare are they.

But—and his teeth flashed in a wide grin as he saw it—there were correspondingly great masses of both '238 and '235. He brought the ship close to the surface, cloaked in its light-building warp, near a fiery

plain where both isotopes could be detected. Through a screened telescope he saw what he was after—a field of writhing growth, nearly hidden by a fine dust of spores. They weren't plants—they were molds; and at enormous magnification he observed their life-cycle as they ate into the uranium, turning the rarer isotopes into their structures, throwing out all impurities, including U-235. Their rate of metabolism was astonishingly fast; and when a colony of them had exhausted all the uranium near it, the molds cast off their spores and died. The spores, heavily encysted, drifted about in the hot gases at the surface, until the nearness of their food drew them to the planet's semimolten surface. Then they sprouted, fed, spored and died again.

Bellew let his ship settle even more, and dropped a tube of berylusteel from the hull to a drift of spores. A few of them were drawn upward by the suction he set up; then, tube and all, he snapped the ship into space. Once out there, he experimented briefly and thoroughly with his prize. The mold certainly filled the bill. The cysts apparently could stay alive without nourishment indefinitely. They germinated readily at any temperature, as long as they were in the presence of uranium. Happily, Bellew slipped into hyperspace and drove back toward Artna.

THE SEARCH of the inner planet and the capture of the spores had taken considerably longer than Bell had expected; he was twenty hours overdue when at last he sighted the great Artnan probability wave transmitter. He cast about anxiously for the spot where he had left Slimmy and the Martians. There was nothing there but tumbled sand.

Bell flung the ship down and, through a telescope, examined the ground. There had been a scuffle, apparently, and if Bell knew Slimmy, it must have been a pip, in spite of the fact that Martians are three times as strong as any human.

"A hell of a mess," he murmured, and swung the ship toward the hollow where lay the Martian cruiser.

Landing next to it, he hunted through Slimmy's locker until he found what he wanted, concealed in a cleverly devised secret compartment. Then he opened the air lock and strode over to the Martian ship.

The port swung open as he approached. Its Wonders stood there, apparently suffering little from what

must have been quite a hangover. "What do you want?"

"Slimmy. What have you done with him?"

"Your companion is safe. He will be returned to you alive if you give us what you went away to get."

"You've killed him!"

Its Wonders stood aside. "Come in and see for yourself."

Bell pushed past him. Slimmy was there, looking very sheepish in the iron grip of the other two Martians.

"Hiya, boy," he said.

"Slimmy! What happened?"

"What happened to you in Cincinnati that night we spent at Bert's place?"

Bellew remembered the occasion. He wasn't proud of it. He'd tried to outdrink half a dozen boron miners and had failed rather miserably. He remembered with distaste the oily feeling at the pit of his stomach, and how liquor had suddenly turned from one of the greater pleasures of life into nothing more nor less than an emetic. "What's that got to do—"

"They fooled me, that's all. After you'd been gone about eight hours or so they stopped trying not to swallow the stuff and began to get greedy. I missed the gag— I fed it to them as fast as they would take it. They all got sick. Very sick. Then they started to sober up, and I had to feed 'em more while they were still weak. Gallon for gallon, they threw off what I fed them. I don't know how they did it—they sure can take it. Anyhow, I ran plumb out of cocola. We shoulda killed 'em."

"We will," said Bell grimly, his jaw bunching. "O. K., fellers—let him go now." He reached casually into his pocket and pulled out a blued-steel automatic blaster. The Martians stiffened indignantly.

"Where did you get that?" said Heaven. "We had your promise to allow us to destroy every weapon you had aboard. You destroyed all of ours. How is it you kept that?"

Again Bell found himself wishing that a Martian could express emotion. He'd have given anything to know just how mad the tall Martian was.

"This," said Bellew, stepping aside to let the released Slimmy past him, "is what we call, on Earth, an ace in the hole."

The Martians started and stopped a concerted rush at Bell as he glanced over to see if Slimmy was safe in the silver ship, and then turned to them again.

"Nice to've known you," he said, and backed out.

As the Earth ship rose gently away from Artna, Slimmy looked happily up from the controls. "You know, Bell, in spite of the fact that it was a dirty trick to hold out that blaster in spite of giving our word, I'm glad you did it."

Bellew looked at the blaster and grinned, moving toward the refuse lock. "Swing her a little left," he said, sighting through a port. "You got the wrong idea, chum." He dropped the gun into the lock, closed the upper door, and put his hand on the dumping lever. "We promised to let them destroy all our deadly weapons. They did. This is no blaster. It's our precious little water pistol; and am I glad to do *this!*" and he threw the lever. The gun curved down and dropped right in front of the air lock of the Martian ship. Three lanky figures pounced on it, and a jet of soapy water shot futilely up at them.

THE END.

DEVIL'S POWDER

By Malcolm Jameson

The drug was getting aboard somehow—and making the men do peculiar things. Somehow, they had to stop its smuggling—

Illustrated by Schneeman

THE screaming and shouting in the galley were the first sounds Captain Bullard heard when he returned aboard the good ship *Pollux*. At the first wild yelp he bounded forward, knocking a couple of giggling bluejackets out of his way, and reached the pantry door just in time

to see a knot of men bear the ship's cook away, struggling and raving. Bullard watched them go and then strode into the usually trim and shipshape kitchen of the space cruiser. On the *Pollux* they varied the regulation sky diet of pellet concentrates with one old-fashioned cooked meal a day.

"What goes on here?" he demanded of a cook's helper, who was sheepishly ladling cakes of laundry soap out of a caldron that contained a mess that started out to be soup. Broken packages of food powders and dinted utensils strewed the deck. The place looked as though a four-inch H.E. had just exploded.

"Nothing, sir. Just the chef went nuts, that's all, sir. Like everybody else's doing," said the man, calmly continuing his clean-up work as if it were long-established ship's routine. "He's the third today."

Bullard glared. The aërogram that recalled him from his hard-earned leave had hinted at a desperate state of affairs on the trophy-winning ship, but her new captain was hardly prepared for anything like this.

"What do you mean, went nuts?" barked Bullard. "What did he do?"

"Why, sir, he dumped a lotta junk in this here stew and said it was going to be ambrosia to coax fireflies in, then he pitched his shoes in too 'cause he said they were full of anti-heebie-jeebie vitamins. After that he climbed up onto the range and began dancing, saying he was the great god Jupiter Pluvius and I should do a double backflip kowtow. Then he started throwing things—"

Bullard gave a growl, wheeled and walked out, snapping out orders to the first man he met in the passage to find the exec and the doctor and tell them he wanted them in his cabin at once.

They lost little time in getting there, those two. It was a very harried-looking Commander Moore who presented himself, worry and relief struggling to get possession of his expression—worry over what had happened while he had been acting captain, relief at being superseded. A moment later the doctor came in, wearing a look of complete bewilderment.

"This is a pretty howdy-you-do," said Bullard quietly, looking first at one and then at the other of them. They both nodded dismally. "Well, go on—say something! Where do we stand, how did it start, and all the rest of it? Make it snappy."

The doctor spoke first.

"Nine lunatics in irons in the sick-bay just now. Yesterday we shipped off four to Lunar Base for institutional treatment. There have been altogether eighty-four cases, but most of them have gone back to duty. They're still a little cuckoo, but not dangerous. It's a sort of epidemic. Mass insanity, so to speak—"

"Tommyrot!" snorted Bullard. "Give me facts. Is it booze, drugs, or don't you know?"

"It is not booze," said the doctor emphatically, "and if it is a drug it is a brand-new kind. We have made every test—there is nothing on the breath, nothing in the blood stream, nothing in the excreta that responds chemically. The psychotic symptoms differ in every case. I can't formulate a rule. It's . . . uh . . . well, just a general nuttiness. There's no way else to put it. Some get over it and some don't. In either case they fail to remember anything about it, except that they have just had a hell of a grand time and would like to do it all over again. It's very vague, but there is no doubt it's ecstatic."

"Hm-m-m," frowned Bullard. "That sounds like a drug to me, and an exceedingly dangerous drug at that. Have you heard of neurobane?"

Dr. Herilon shook his head.

"It's new. It turned up at home while I was there. The Bureau of Health knows something about it. Burn up the ether until you get the dope, then come back."

The doctor flitted from the room, relieved at having been given a straw of hope to cling to. Bullard turned to Moore and motioned to him to sit down.

"Begin at the beginning, Moore, and tell me the whole sad story."

"I BLAME it on the draft," commenced Moore, "that came to replace the old crew—"

"What!" yelled Bullard, leaping up from his chair. "Have they switched crews on us?"

"Practically. The department said we had done such a fine job of training that they thought they would keep on letting us do it. So they detached about half the men and petty officers and sent us a big draft of fresh-caught farmers and said to break 'em in."

Bullard groaned. It was one thing to build a ship's company into a fine team, another to have it snatched away just as one was about to enjoy the use of it. To have to do that over and over was an appalling prospect. But all he said was:

"Yes, the assimilation of so many new men is always tough. Go on."

"That was at Lunar, just after you left. Then we came here to Venus and went on the range for small-arms practice. That is when this wave of craziness began. One little guy down in the fourth division crawled into a scuttle and refused to come out. He said he liked it there, snugly surrounded by metal. Said he was a grade-A rivet and didn't intend to shake loose until they scrapped the ship. We had to cut him out with a flame jet under a cooling spray, he had jammed himself in so tightly."

Moore paused and sighed.

"That was just one. There was the fellow who thought he was invisible, and there was the one who believed he was radio-active. He tried to wreck the sickbay because the doctor wouldn't bottle his breath and pay him for it. He claimed it was pure radon gas and worth a thousand sols a cubic foot. Then there was—"

"Never mind the details. What did you do?"

"Doubled up the jimmy-legs detail on the theory it was dope. Two of *them* went nuts. Maybe it is. Put plenty of sentries around the small-arms range and searched the ship with ultraviolet probers. Not a smell. If there's dope, it's damn cleverly hid. We know the lockers and storerooms are clean, and every man is gone over with a spy ray whenever he goes to or from shore. All liberty is stopped; the only place they go is to the range and they can't possibly contact the outside there."

Moore stopped. He had taken every precaution a human could think of, but the thing had gone on. The doctor and his gang had cooperated nobly, not sleeping for weeks. The trouble was clearly within their field, but the cause of it baffled them. They could not get information out of men whose recent memories were blank.

"Bad, bad," murmured Bullard, drumming the desk with his fingertips.

"You bet it's bad—and getting worse."

Then the doctor came in with the

message in his hand. He handed it without a word to the captain and waited while it was read. The message was from the Bureau and said, in part:

Neurobane is a bluish powder with a faint odor of crushed celery. Research in connection with it is rendered hazardous for the reason that the odor of it incites a mad and irresistible desire in the smeller to possess and eat it, whereupon insanity of a more or less permanent nature is quite likely to ensue, the first symptoms of which is to acquire more of the drug at all costs—

"God, what a money-maker for a gang of unscrupulous crooks," ejaculated Bullard, looking up at the doctor. The doctor nodded grimly.

We found, after we had suffered the derangement of several of our subjects, that the stuff can be handled with comparative safety if the nasal passages are carefully stoppered. Later we learned that about one percent of men tested are immune to its temptation. It is probably from that class that the purveyors of this devilish drug are recruited—

"And so we can't detect 'em by looking for nose plugs," complained the doctor, "and the nonimmune fall for the stuff, and then forget about it."

Captain Bullard handed back the report.

"Life on the *Pollux*," he remarked, thinking over his career on board her, "is just one thing after another."

It was dawn before Bullard laid aside the lists he had been studying and correlating. He had found one significant fact. There had been no psychoses prior to coming to Venus, nor any that had not been preceded by at least one day's firing on the range, though usually it took three consecutive days of that before one of the major breakdowns occurred. That last qualification was one that shook the drug theory a little bit. Could there be a neurotic reaction from too much firing of the pellet guns? Yet Bullard had never heard of it, though he was a qualified sharpshooter himself and had spent hundreds of hours on the range in company with many other men. He buzzed for Moore.

"Pick out three men of the last draft who fired both yesterday and the day before and see that they go to the range again today. Have the rest of the party made up of first-time men. And, Moore—"

"Yes, sir?"

"I am going to fire the course myself. I am getting rusty."

Moore looked dubious.

"I tried that myself. You won't see anything there. The range has been searched time and time again—"

"Yes, yes," said Bullard, quietly. "Please see that the party is ready, will you?"

He went, in slicker and hip boots like everyone else. In Venus it rains most of the time; the rest of the time it is foggy. But it is an excellent place to get the hang of infrared target finders.

Captain Bullard walked down the firing line watching quite casually how the recruits attended to their instructions. He noticed that the ship's gunner was a new man, as were most of the gunner's mates. They continually went back and forth, heavily laden with bandoliers, and issued the cartridges. It was hard to see detail more than a few yards through the persistent mist that prevailed between rain squalls, but to the naked eye all was as it should be. The *Pollux*, apparently, was doing her customarily good job of making every man aboard an expert in the things he was supposed to know and do.

Twice Bullard picked a spot to shoot from and then left it for another, but saw nothing to arouse suspicion. At the third firing point he let loose his first string and got eighteen hits out of a possible twenty, missing the second and ninth shot. He grimaced and reloaded. With the superb fog-penetrating sights the modern guns were fitted with he should have hit twenty times out of twenty even if the range were five thousand meters. He moved once more and shot the course all over. But though he took his time and kept his eyes well peeled to what went on about him, he still did not see what he hoped to see.

The rest of the day he stood back of the firing line watching the distribution of ammunition. A gunner's mate would bend over a prone candidate and hand him clips of cartridges. There would be a word of advice, and the burdened bullet supplier would pass on. It was all very regular. The men, in the main, shot admirably, considering they were all boots.

After the day's work was over and the men had formed in ranks to march back to the ship, Bullard went over the firing line yard by yard, taking note of the work of the sweepers, who were picking up the spent cartridges and otherwise cleaning up the place. At one spot he paused. Lying half trampled in the mud was a shiny white object. Bullard stooped and picked it up.

It was a bullet. It was a small slug of adamantium, the toughest and hardest of all metals, crammed to capacity with the terrific explosive feroxite and would burst instantly on any reasonable heavy impact. He pocketed it, wonderingly, and continued on down the line. Farther on he picked up two more. Then one; then another; then three in one locality. By then a deep frown engraved Captain Bullard's forehead. It was dangerous business to hand green men defective ammunition. Why had these pellets broken loose from their cartridge cases? Had it happened with a sharp jar, twenty men might have gone up in fragments and there would have been nothing left but a muddy crater to show where they had been.

He went on to inspect the fences and saw the sentries at fifty-yard intervals. The range, thanks to Moore's precautions, really did look to be inaccessible. Whereupon Bullard, with a pocketful of the dangerous pellets, went back to his ship, walking slowly and thoughtfully.

That night two of Bullard's guinea pigs cracked up and were promptly suppressed by the masters-at-arms trailing them. They were strapped quickly in strait jackets and hauled off to the sickbay, mouthing wild nonsense and fantasy. The third took his in another way. He passed out without a sign of violence and went happily to sleep, his face wreathed in smiles of beatific satisfaction. Later, two of the one-day men collapsed, but by morning they had every appearance of being normal, though there was a haunted look in their eyes, as if they had had a glimpse of Heaven and had had it suddenly wrested from them.

"Look here, Moore," said Captain Bullard, just before quarters the next day, "have you ever heard of the wreck of the *Centurion?*"

"Why, no, sir."

Bullard chuckled. "Neither have I. But anyway, she lies a little south of Cupid Rock in the Ocean of Love. That is about forty kilos east of here. I want you to send divers there tomorrow and give me a full report of what you find. We have ten

diving outfits, haven't we?"

"Yes, sir," admitted Moore, wonderingly.

"Take the gunner—what's his name? Stosk?—and those new gunner's mates. Send 'em all down and see that they stay there for as many hours as they can stand it. Understand?"

"Yes, and no."

"Good enough. Do it. That is all."

Bullard thought a moment, then added:

"You might take Dr. Herilon with you, too. You never can tell with diving expeditions."

"Aye, aye, sir," acknowledged Moore, but there was no hint of true understanding. Nor could there be. Yet he had supreme confidence in Bullard, for all his penchant for doing things indirectly. If he wanted the nonexistent *Centurion* looked for, that was that. He would look for it most diligently.

The following day Bullard watched with seeming indifference as the salvage party shoved off. For that day the work of qualification on the range had been suspended. Fraser, the gunnery officer, went with the divers as was customary.

But immediately they were clear of the ship he sent his messenger for Benton. Benton, resplendent in his new gold stripe—an award finally made him after Captain Bullard's repeated recommendations — reported. Benton was junior assistant engineer now, but he was a man that his skipper knew he could rely on, come hell or high water. Bullard opened the cabinet that held the keys to the armory and the magazines. Of those there were only three each. The gunnery officer had custody of one, the gunner the second. The third of the set hung in the captain's own bedroom.

"Get gas masks and come with me," was all that Bullard said, taking down the key to the armory and slipping it into his pocket.

They let themselves in and walked past the workroom where the loading machines were, and the powder test ovens. Neither cast so much as a glance at the row of twenty symbolic cutlasses neatly racked by the small-arms magazine door. The skipper of the *Pollux* used another key and led the way into the place where many cases of pellet-gun ammunition were stacked.

"I may need some mule labor here," said Bullard with a smile. "As a freshly commissioned ensign, are you above that sort of thing?"

"You knew me, sir," grinned Benton, "when I was nothing but a tube man. What do you think?"

"O. K.," Bullard grinned back, and he took off his own coat.

It took them a good many hours to examine all of those cases, for they were stacked eight feet high and there were four tiers of them. Each was branded on the end, "25 mm. pellet-gun ammunition, loaded with feroxite—Grand Arsenal, Lunar Base."

"Look for a difference, or some secret mark," suggested Bullard in an undertone.

It took them a long time to notice it, for it was a minute difference. The markings on the boxes seemed identical despite their critical examination of them. But at length Benton made the discovery.

"Here it is, sir. Look. This box has no period after the 'mm', while most of the others have."

"Right," said Bullard approvingly, and snaked the box aside.

Later they found five others like it. "Now put on your gas mask," directed Bullard, still sweating and panting from the work of heaving

the boxes around. He looked at his watch. It had taken half the day to get this far, and he was thankful for his foresight in getting rid of the gunner's gang for so long a time. Otherwise he could not have made so free with the contents of the armory without tipping off his as yet unknown opponents as to the course his investigation was taking.

"Now comes the dirty work," commented Bullard, with a wink. He was mopping his forehead. "Go get friend Carrick, the pharmacist's mate, for me. Never mind a gas mask, but bring along a strait jacket."

In due time Benton reappeared with Carrick behind him. His captain talked to him in low tones for a minute and Carrick's features brightened.

"Yes, sir," he said, "this." And he scribbled a prescription on a strip of paper.

"Thanks," said the skipper, dryly. "Now, Carrick, would you mind letting us strap you up in that thing?" pointing to the strait jacket.

"Er . . . uh . . . no, sir," said Carrick hesitantly, looking hopefully at Benton, trusting he would get a clue. He admired his captain and all that, but in these days of mass insanity how could a fellow tell? Maybe the skipper had gone nuts, too. Else, why would he be dirty and sweaty in a deserted armory and make screwy propositions like the one he had just made about making half the crew sick as dogs, and on top of that suggesting that his chief pharmacist's mate strap himself into a strait jacket?

"Do him up, Benton," was all that Captain Bullard said. And then he began hunting around for a case opener. The next thing on the agenda was to pry the lids off the boxes with the un-perioded "mm's" so neatly that a subsequent inspection would not reveal that it had been done.

BY THE TIME Carrick was done up and lashed to a stanchion, the first box was open and a cascade of brass cartridges had been spilled out onto the deck.

"Now a bullet jack, Benton, and be sure your gas mask is on tight," called Bullard, breathless with anticipation.

An instant later he had pried an explosive pellet from the first cartridge case in his hand and had spilled out into his palm a little pile of bluish powder.

"Ah, sweet papa—it's heavenly," cooed Carrick, the moment it was shoved under his nose. And the two stern onlookers saw his arms writhe under their tight fastenings and the muscles of his jaw twitch in hungry anticipation.

"You'd like some?" queried the captain, watching him like a hawk.

"Like it!" screamed Carrick, struggling with his binding harness. "Why, you gilt-striped stuffed-shirt, I'd murder you just for another sniff of it. I'd give a year's pay, I'd give—"

Bullard withdrew his hand, watching his captive narrowly.

"O. K.," he said soothingly. "You'll have plenty of sniffs. But before I give them to you I want just one thing. Can you match that odor?"

"No, no!" wailed Carrick. "There's nothing like it under Heaven," and he slobbered and renewed his writhings.

There followed a long and patient interview, sputtering on Carrick's part, smooth and beguiling on Bullard's, while Benton looked on, not quite getting what it was all about. Eventually a deal was made.

"Oh, I'll try—I'll try, sir," wept Carrick, at last, and after more soothing promises he pulled himself together enough to dictate a list of ingredients that might do the trick. A moment later Benton was on his way to the dispensary with the list of materials and equipment—vials, test tubes and certain small amounts of essential oils. A bit after that he and his captain were busy compounding, under the frantic eyes of their trussed-up prisoner, the mighty potion.

"Ah, sweet—sweet," declared Carrick, blissfully, after the fourth unsuccessful try. "I'd sell my soul for that."

They gave him a taste and he gagged. Then, after some time of watching, they unloosed him.

"Now mind you," reminded the captain, sharply, as the benumbed Carrick tumbled out of his bindings, "not a word of this to anybody. Blend this odor with the prescription we first talked of, reduce it to powder and give it back to me. Heaven will have to wait."

"Aye, aye, sir," said the humbled Carrick, thoroughly subdued. He had a cloudy memory of the extravagances he had just uttered and was ashamed to the uttermost. He gazed unseeingly at the tightly sealed bottles of blue powder that stood about the floor and the pile of empty cartridge cases and boxes full of feroxite pellets.

"Within the hour?" reminded Captain Bullard.

"Oh, yes, sir," assured his chief pharmacist's mate. "I'll get at it at once." Then, with a hangdog air he added, "It's funny how a thing that smells so good should taste so lousy."

Bullard knit his brows.

"It might be better to tone the taste a little. Can you do that?"

"I'll try, sir."

"All right. Get going."

While Carrick was gone the captain and Benton unloaded the rest of the doped cartridges and took careful photographs of every stage, not neglecting the brandings on the ends of the packing cases which also showed the number of the packer. Bullard sat down and scribbled out a message to the Director of the I.B.I.

Trail packer number KG-8167 of Grand Arsenal, Lunar Base, for contact with main squeeze drug racket. Stuff going out in form of ammunition. Telephotos herewith. Note absence of period after 'mm' on marking. We are taking measures to apprehend peddlers; advise other ships do same. BULLARD.

"Here, slap this and these shots into the televisor. When you get 'acknowledge' come on back here. We are only half done."

Benton took the message and the cameras and left, and so did Bullard for a few minutes. He went to lock the telltale dope powder in his personal safe. By the time they were both back, Carrick was there with his can of substitute powder. It took them the rest of the day, working like demons, to reload the cartridges and fit the bullets back in. Then they repacked the cases, stacked them precisely as they had found them, locked up the armory and called it a day.

"I still don't get—" began Benton, having sweat like a horse all day and witnessed the unorthodox handling of his pal Carrick.

"You will," grunted Bullard with grim humor. "You've lived in the fo'c's'le, Benton—what would you do if a shipmate crossed you? Run to the skipper and tattle?"

"Not by a damnsite, sir. I'd—"

"Exactly." Bullard yawned. "See you in the morning, Benton."

THE DIVING PARTY found no traces of the lost *Centurion*, but that night there were no new cases of psychosis. Moore and Fraser were aching to know what it was all about, as was the doctor, but they did not dare ask. Later, Bullard sent for Moore and told him to send range parties ashore again tomorrow.

"This time I want our old *Pollux* men to go on the firing line. Sure, I know they are all qualified marksmen or better, but a refresher course won't hurt them. And as you go out, tell the surgeon to step in."

When the doctor came he faced a skipper who had lost some of the worried expression of the day before. Indeed, there seemed to be a hint of a twinkle in his eye.

"Listen, doc. You are in for a bad night tomorrow, I think, but don't let it trouble you. I fear a wave of—well, let's call it ptomaine—but it will pass. For the sake of your own reputation, it is just as well you know no more about it than that. All you have to do is keep a straight face, be sympathetic, ask 'em no questions, but by all means keep an accurate list of the sick."

Bullard let the puzzled doctor go, and then dismissed the current troubles from his mind. For twenty-four hours he devoted himself to catching up on the ship's correspondence. The veteran Polliwogs duly went on the range, fired, and came back again. It was an uneventful day. And that night was another night without a single skyman suddenly turning to a raving maniac.

But it would be untrue to say that it was a quiet night.

It must have been a little past eight bells when the first case broke. It was a skyman, second class, previously disrated for bad conduct. He began wailing and moaning about an excruciating bellyache, and a few minutes later he was groveling on the deck, retching and vomiting and swearing his last hour had come. He was a very, very sick man. And hardly had they dragged him off to the sickbay and emptied him out by means of a stomach pump, when there was another. And another. And another. Long before dawn the sickbay was jammed with them and extra cots had been laid just outside. Bullard's forecast had proved correct. The doctor and his helpers had a busy time.

But by daylight it was all over, and men by groups began leaving the sickbay for duty. They were a crestfallen, shame-faced crowd, but there was blood in their eye.

"Now what?" asked Moore. He was beginning to be fed up with the devious ways of this new skipper, who after all was no older than himself.

"Wait," said Bullard, nonchalantly. Then added, "Let's have an inspection of the crew in the morning. I'd like to look over these new men."

THE TIME for inspection duly came, and Bullard walked down the silent rows of men, studying them carefully, one by one. In the second division he took two looks at their gunner's mate. Both his eyes were blackened and swollen almost shut, and when he walked he limped.

"What happened to you?" asked Bullard, sharply.

"Slipped on a ladder, sir, and fell."

Bullard turned to his master-at-arms.

"This is one of them. Double irons and into the brig!"

"Yes, sir. Come on, buddy. You're done."

The amazed petty officer allowed himself to be led away.

In the fourth division they came upon another petty officer, this one with badly skinned knuckles on one hand, and the other arm in a sling. His ear looked as if it had been chewed.

"Cell 2 for him," said Bullard, briefly.

Deeper in the ship another pair of gunners' mates were found, similarly decorated. They, too, were promptly put in durance vile. Except for the many bruised and raw knuckles exhibited by the sullen victims of the recent ptomaine epidemic, there was little else about the inspection to attract attention. After it was over, Bullard took Moore and the doctor aside.

"From this point you can finish," he told his executive, and sketched out the high spots of what he had done.

"So that's where those men got hold of methylene blue," exclaimed the doctor, admiringly.

"Yes. And the ipecac and essence of Croton oil and some other truck," grinned Bullard. "I hope you are prepared to identify the would-be buyers, if it comes to that."

"I am," said the doctor.

"But these four you slammed into the brig without so much as a word?" Moore wanted to know.

"Elementary skyman psychology, my dear Moore," said his captain, pleasantly. "Sell a gob a bill of goods and you have to deliver, or else. They shelled out for dope and look what they got. Naturally, their first impulse was to take it out of the seller's hide. It saves us the embarrassment of bringing the whole nine of the range petty officers up on trial and then having five of them acquitted. Now we know who's who."

"Oh," said Moore. "I hadn't thought of that." And he recalled with some satisfaction how well decorated that last chiseling gunner's mate had been. "But what about Gunner Stosk? Wasn't he the kingpin?"

"Mr. Stosk is at the moment suffering from three fraetured ribs, the loss of five incisors, a dislocated jaw, and various contusions. He is, in short, in bed—a very disillusioned man. You see, our masters-at-arms had instructions to ignore personal scraps during the night. After the four petty officers got theirs, what should be more natural but for them to pass it on? If they had double-crossed anybody, it was only because they had been double-crossed themselves. Hence the condition of our erstwhile gunner, Stosk."

"So you have them all—witnesses, the peddlers, and the distributor? It's a regular house-that-Jack-built thing." Moore had forgiven Bullard his mysterious, off-the-record investigation. Now he saw how perfect the trap was. "Too bad we couldn't snag the louse who originally supplied the stuff."

"Oh," said Captain Bullard, serenely, "as to that, it seems we did. You see, Stosk never knew I spent the day in the armory while he was diving for the *Centurion*. When his gang backfired on him he jumped to the conclusion that he had been double-crossed himself—that the Lunar crowd had shipped him phony dope. So he told me the full story. It went off four hours ago to the I.B.I. Here's the answer that just came back."

The two officers read the ethergram and whistled softly.

"And that's that," said Bullard. "Now let's get back to running the old *Pollux*. What else is on your mind, Moore?"

THE END.

OLD FIREBALL

By Nat Schachner

The possibilities of legal trickery in space are wonderful. For instance, the proper recording of a mining claim may take an astronomer—

Illustrated by Schneeman

SIMEON KENTON was an irascible man. He knew it; the far-flung thousands employed by the Kenton Space Enterprises, Unlimited, knew it. But only his daughter, Sally, knew he worked hard at being an irascible man. And that increased his irascibility to such a pitch that he could

only glare and sputter unintelligible words.

"Har-r-rumph!" he spluttered. "If you weren't my own flesh and blood, I'd—"

"You'd be the first to agree that a man in your position owes it to his daughter to see to it that her account isn't perpetually overdrawn," she smiled.

Old Fireball was his nickname because of his habit of staging explosions on the slightest provocation. He exploded now.

"You get a larger allowance than any girl of your acquaintance," he yelled. "Yet you have the nerve to stand there and ask for more. You must think I'm made of money."

"Aren't you, dad?"

She asked it so innocently and with such a candid air that he felt utterly deflated. "Well, humph, that is—I may have a little money, but—" His indignation rose again. He snatched the statement of her account from his desk, waved it at her. "Damn it, Sally, I've had enough of this nonsense. Not another cent do you get—"

Father and daughter were standing in the private office of the president, owner and sole manager of the Kenton Space Enterprises. From this small, simply furnished room Simeon Kenton ruled an empire vaster by far than any of the mighty empires of old Earth. Rome, Assyria, England; Nazi Germany, Nippo-China, Australo-America had flung their tight webs over large portions of the Earth's surface—but Simeon Kenton's fleet spaceships fastened their flags in the spongy marshes of Venus, on the desolate wastes of Mars, on rocky asteroids and mighty Jupiter itself.

Technically it was merely a commercial empire, with ultimate sovereignty in the Interplanetary Commission whose seal of approval was necessary on all leaseholds, claims of ownership, mining rights, trade routes, cargoes, exploitations, wages and hours and conditions of employment. Actually Simeon Kenton was the kingpin of the spaceways, with half a dozen smaller princelets competing with him for concessions, spheres of influence and business. In the old days, when Simeon was a young man coming up the hard way, there had been no Interplanetary Commission and everything went, much to Old Fireball's irascible satisfaction. Not that he was a tyrant, by any manner of means. He was a driver and a hard taskmaster to his men, admitting of no failure or excuse; but he was fair and quick to reward the worthy. If he was feared and if every man in his employ trembled in his space boots at the sight of him, deep down there was the comforting feeling that Old Fireball knew what he was about, that he never let them down.

Simeon loved the exercise of power, a vast, benevolent paternalism with himself as the paterfamilias. As space became less of a thing unknown, and law and order took the place of the old scramble for new worlds, however, codes were established, spheres delimited and space law came into being. All this was much to Old Fireball's tremendous disgust. He grumbled constantly of the good old days, when men were men and not members of the Interplanetary Union of Spacemen, Blasters, Rocket Engineers, Wreckers and Cargo Handlers, Local No. 176.

"Har-rrrumph!" he'd snort, "if a man's got a grievance, why can't he come direct to me instead of running like a dodgasted infant to whine to his union and the commission? Sure there're chiselers among the other companies. There's that double-

dyed leohippus, Jericho Foote, of Mammoth Exploitations. Feeds his men stinking, crawling food, pays 'em when he can't help himself, wriggles out o' his contracts like a Venusian swamp snake. I wouldn't trust that smooth-faced, smooth-talking Simon Legree farther 'n I could throw an asteroid." He rubbed his own straggly white whiskers complacently. "Regulations an' laws're all right for guys like him, but not for me."

Accordingly he instituted a legal department in Kenton Space Enterprises, Unlimited; and many and Homeric were the legal tilts and battles between himself and the commission. He snorted and yowled and tore his hair when a decision went against him and rained maledictions on the unfortunate head of his chief legal adviser, Roger Horn, and on the august members of the commission alike; but if the truth were to be told, he loved it. Space had become too tame and business had become too grooved; and these tilts were the safety valves for his love of a keen-witted fight.

He scared everyone but his daughter. She smiled understandingly at his tantrums and humored him as though he were a crotchety old invalid and went blithely on her way regardless. And they got along famously, even though, as now, he stormed and ranted and fumed.

"Yes, siree," he yelled, "not another cent do you get until the next—"

THE SLIDE PANEL opened noiselessly and a young man came into the room. He was a very determined-looking young man with a square jaw and intent blue eyes. Sally Kenton pivoted on a daintily-shod foot to look at the intruder.

The determined young man didn't see her at first. His blue eyes were set and his square-jawed face pointed like a hunting dog's directly at the incongruous, mildly whiskered saint's visage of her father. There was something very definite on the young man's mind.

"Mr. Kenton," he said, "I've been in your employ for more than a year now and—"

Simeon's pale-washed eyes flashed dangerously behind his glasses. All the irascibility his daughter had frustrated focused on this most impertinent, rash intruder.

"Ah, so you have, have you?" he purred. "And what might be your name, my dear sir?"

"Dale—Kerry Dale. I'm in the legal department, under Mr. Horn. And I think—"

Simeon Kenton seemed to grow on the sight. His chest puffed and his cheeks puffed in unison. He raised on his toes until his five-feet-four assumed the dimensions of a giant. "So you *think*, Mr. Kerry Dale, or whatever your name might be? You think you have the right to barge in on me when I'm in private conference without so much as a by-your-leave and inflict your utterly useless thoughts on *me*. When you've been five years in my employ, not just twelve months, fifty-two weeks, three hundred and sixty-five days, you'll know better than to waste my time with dodgasted nonsense. Get back to your desk, Mr. Kerry Dale, and stay there. That's what I suppose that fool, Roger Horn, is paying out my hard-earned money for—"

He stopped for breath; inflating his lungs for another blast.

But the young man gave him no chance to continue. He was a tall young man and with a certain set to his shoulders, as Sally noted with approval. She enjoyed her father's outbursts and knew how strong men

wilted and blanched before them, and slinked—or was it slunk—away before their withering blasts like whipped dogs. Would this Kerry Dale do the same?

He did not. A certain steely glint hardened his intent blue eyes. "I've always wondered why they called you Old Fireball," he said slowly. "Now I know. The term is apt. I've seen them in space. They're little and all puffed up and they explode at the merest contact with a breath of air and scatter themselves harmlessly. Calm down, sir; or you'll get a stroke."

Sally heard old Simeon's quick, choking gasp. Her own senses tingled. She was going to enjoy this.

"Me—*Old Fireball!* Why, you young snipperwhipper—I mean whappersnipper—damn it, you know what I mean—get out of here before I—"

The young man took a step forward. His hands gripped the fuming old man by the shoulders. "Not before you hear what I've got to say," he snapped. "I'm ashamed of you," he said severely. "I thought there was a *man* running the Kenton Space Enterprises. People said there was. That was why I was anxious to get in. That was why I took a job in that scrape-and-bow legal department of yours as soon as I got out of law school, under that smug old fossil, Roger Horn. That was why I worked my head off, twenty-five hours a day, twisting good, honest law and picking legalisms in the space codes so your piratical deals could sneak through regardless."

His indignation mounted in equal waves with the color in his face, and with each surge he shook the mighty Simeon Kenton just a little harder. "I suppose you think it was your fine Roger Horn, that puffed-out bag of wind, who won you the suit against Mammoth last month? I suppose you think it was that same self-winding Horn who thought up that neat little scheme whereby you obtained legal possession of Vesta against the actual staking-out claim of the government of Mars? Sure he took the credit for it. He always does. Loyalty of the department! Loyalty to Kenton Space Enterprises! Bah!"

Simeon was choking, spluttering, opening his mouth in vain attempt to make headway against this most remarkable torrent of words from this most remarkable young man, and failing utterly.

Kerry plunged on, not even knowing Simeon was trying to say something.

"Who cares about your overgrown schemes?" he yelled. "For a year I cared, and became a wage slave. Me, Kerry Dale, *summa cum laude* from the Planet Law School, voted most likely to succeed. Let me tell you what happened this very morning. I went to your ass of a legal chief, as humble as you please. I asked him for a raise; for a job a little above the thirty-ninth assistant-office-boy job I still hold; and what do you think the old windbag tells me?"

Simeon opened his mouth again; and it was rattled shut for him. "I'll tell you," Kerry yelled down at him. "He hemmed and hawed and grunted like an old sow and twiddled his thumbs and said it was a fixed rule in the empire of his majesty, Old Fireball, never to grant promotions under three years of slavery. He said—"

OLD SIMEON found tongue at last. It had swelled with indignation until it protruded from his mouth. "That goddasted blitherskite—I mean that dadgosted slitherblite—did he dare call me *Old Fireball?*"

For the first time Kerry Dale grinned. He released the fuming old man. "He didn't quite call you that," he admitted. "That's my own inventive genius; or rather, the inventive genius of every slaving underling in your employ. But I thought, like a fool, I'd come direct to you. They said you were a hard man and given to tantrums; but fair. I see now they were mistaken."

Old Simeon shook his released shoulders back into position. He twitched his rumpled vest back into shape with a violent gesture. He saw red—and yellow and purple and a lot of colors not in the normal spectrum. "Get out of here, you . . . you overgrown son of a space cook! Give you a raise? Sure I'll give you a raise, with a blast of rocket fuel under your space-rotted tail! Get out of here, young man. You're fired."

"You can't fire me," Kerry Dale said bitterly. "I've already resigned. I resigned as soon as I took a good look at you."

He turned sharply on his heel and stalked out through the open slide panel. The mechanism closed softly behind him. Old Simeon shook his fist. His wispy hair and wispier beard were all rumpled, and there was a glare in his eyes.

"Of all the impertinent young—"

Sally was interested; yet offended. Interested in the way this most remarkable young man had maltreated her revered parent—something that no one had dared do as long as she could remember—and offended because in all that stormy interview not once had his eyes strayed toward her; not once had he shown by look or gesture that she was even present. She wasn't accustomed to that sort of treatment any more than Simeon Kenton was accustomed to the kind *he* had received.

Even if she hadn't been Sally Kenton, men's glances would inevitably have gravitated in her direction. She was mighty easy to look at. From the top of gold-bronze head to most satisfyingly shapely ankles she attracted attention, and the neat little dimple in her chin and the quick quirk of her lips did their share in fixing that attention. Yet this Kerry Dale had positively not seen her.

"Is that true what he said?" she interrupted Simeon's premeditated flow of language hastily.

Her father almost choked on an epithet; glared at her. "What's true?" he howled.

"That he prepared that Mammoth brief for you and cooked up that deal in which you hornswoggled the Martian Council?"

Sally had learned a thing or two associating with her obstreperous parent.

"How do I know?" he yelled. "That's Horn's business; that's what I pay him for. Do you think I bother my head—"

"You ought to," she told him severely. "It's the business of the head of an organization to know exactly what's going on, down to the last space sweeper," she quoted.

He recognized the quotation. In an off-moment he had permitted himself to be interviewed by the telecaster for the Interplanetary News Service. "Har-rrrumph! I don't know—well, maybe—" He pressed a button.

THE florid features of Roger Horn looked startled on the visiscreen. He was a portly, dignified-looking person. His strong, aquiline nose and bushy, beetling brows overawed judges, and his weighty throat-clearings gave the impression of considered thought.

"Ah—yes, Mr. Kenton?"

"There's a young whelp in your department, Horn. Name of Kerry Dale."

"Why . . . ah . . . that is—"

"Save the frills for the Interplanetary Commission. Did he, or did he not write the Mammoth brief?"

Horn looked unhappy. "Why . . . ah . . . in a manner of speaking—"

"Did he, or did he not punch that legal knothole into the Martial claim on Vesta?" old Simeon pursued relentlessly.

The lawyer squirmed. "Well—in a sense—"

Kenton's glare was baleful. Sally chirruped: "There, what did I tell you?" though she hadn't said a thing.

"Quiet!" yelled her esteemed ancestor. His glare deepened on his lawyer in chief. "So the young snipperwhopper was right! I pay you, and he does all the work."

Horn assembled the rags and tatters of his dignity. "Now look here, Mr. Kenton—"

"Quiet!" Simeon thundered him down. "What do you mean by refusing a raise to such a valuable . . . er . . . young man? Do you want that planetoidal scoundrel, Foote, to get his slimy tentacles on him and show you up for the pompous dincumsnoop you really are? Raise him twenty-five; raise him fifty; but don't let him get away."

Horn looked as though something he ate hadn't quite agreed with him. "I can't," he said feebly. "Young Dale just left here. He said he had resigned."

"Then get him back. Comb the whole dingdratted town for him. Offer him a hundred."

"He said," Horn swallowed hard, "he wouldn't work for Kenton Space Enterprises again if it was the last outfit in the Universe. He said—"

"I don't care what he said. Get him; or else—"

"Y-yes, sir," the lawyer gulped. "I'll do my best."

Old Simeon switched him off, still protesting. "He'll come back," he said complacently, pulling on his chin whiskers. "Just a bit hotheaded, like all youth."

Sally smiled perkily. "Heavy-handed, I'd say rather," she murmured.

Her father winced, rubbed his shoulder.

"About my allowance," she continued. "Do I, or don't I?"

"Not another cent!" he spluttered. Then he caught her eye. "It's blackmail," he howled.

"Of course it is," she agreed sweetly. "I learned that from you, darling. I'm sure you wouldn't want me to mention this little scene I just witnessed. Think how Jericho Foote would love to hear—"

"Don't you dare! What's your price?"

"One thousand per month."

"Trying to ruin me? I won't do it—"

"Mr. Foote's such a sweet old thing," she murmured. "I'm sure—"

Simeon groaned. "To think I've nurtured a thingumgig of a Jovian dikdik in my bosom. I surrender, child; but beware—"

She kissed him on the forehead. "Darling, when you find that young man, will you let me know?"

He stared hard at her. "So-oh! I'm to get a son-in-law who uses force and violence on me?"

"Don't be horrid, dad!" she flashed indignantly. "You're just trying to get back at me. It's utterly ridiculous!"

WHOLLY UNAWARE of the complicated series of wheels he had just set in motion, Kerry Dale walked disconsolately along the back streets of Megalon, the great new metropolis

that had sprung up in the central prairie lands. His hotheadedness had gotten him into trouble again. It wasn't enough he had lost his job, but maltreating the great Simeon Kenton the way he did meant he would be blacklisted in every law office from Earth to distant Ganymede. He was through; washed up! His career was over before it had well begun.

His wandering feet brought him unawares into the suburban district, close to the great rocketport, where every narrow alley held three saloons and half a dozen dives for the benefit of hard-bitten spacemen looking for a spree and a chance to dump the earnings of an entire voyage in a single mad release.

That was what he needed now—a drink!

The light cell scanned him, approved his lack of weapons and police disk, and swung the panel open to admit him.

There were half a dozen men drinking at the bar. Burly, tough-looking eggs, with that peculiar, deep-etched tan upon their faces that came only from long exposure to the penetrating rays of space. Kerry shoved up alongside, said: "A double pulla, bartender. And start another one going on its heels."

The bartender looked at him curiously, whipped the drink into shape and set it before him. Kerry eyed the pale, watery liquid grimly, downed it neat. "Hurry that second one," he commanded.

The nearer man leaned toward him. "That's powerful stuff to handle, son. You're liable to go out like a meteor."

"What's the difference!" Kerry said bitterly.

"Um—I see. Troubles, eh?"

"Just that I lost my job. And there won't be any other."

The man's eyes brightened. He scanned Kerry up and down with manifest approval.

Kerry downed his second morosely. "Thanks for your approval," he said shortly. "But I didn't ask—"

The man came confidentially closer. "Lost your job, eh? Too bad! Wouldn't by any chance be looking for another?"

"There aren't any others," Kerry retorted gloomily.

"*Tsk! Tsk!* How you go on! Here I'm making you a proper offer and you as much as tell me I'm lying."

Kerry stiffened. The pullas was taking effect. It made him curiously springy and lightheaded. "What kind of job?"

"A nice job; a lovely job. Join a spaceship and see the Solar System."

"Oh!"

"What's the matter with a space job?" the man demanded belligerently.

"Nothing; except I'm—"

"This here one I'm offering don't require no experience. Cargo handler. Just a couple o' hours work loading and unloading—the rest of the trip you're practically the ship's guest."

"Well, I—"

"Look, matey. The ship's due to blast off in an hour. She's all loaded and battened down. Jem here's top kicker of the handlers. One o' his men just busted a rib; that's why he needs another man pronto. What d'ye say?"

Kerry considered. And the pulla considered with him. It was quite a comedown—from legal light to cargo wrestler. But what the hell! It was a job; and his funds were out.

A flicker of wariness came to him. "What's the name of the ship?"

The first man turned to his companion. "I offer him a job an' he goes technical on me," he com-

plained. He turned back to Kerry. "What's the dif, matey, if she's the *Mary Ann* or *Flying Dutchman?*"

Kerry wobbled a little and considered that gravely. The more he thought of it, the more it sounded like brilliant sense.

"Done!" he said suddenly.

The man slapped him on the back. "That's the spirit. Bartender, three pullas. Make one double-strength."

Twenty minutes later Kerry's guides and mentors helped his weaving feet out toward the rocketport, shoved him half up the gangplank that led into the bowels of a space-scarred freighter. Its squat flanks were all battened down except for this single bowport, and the cradle on which it rested had swung slowly into the blasting-off position.

Jem, the cargo boss, helped him along. "In you go, son. Gotta hurry now."

Kerry blinked owlishly at the faded lettering along the bow.

"*Flying Meteor,*" he read. "A very good name," he approved with drunken gravity. "A most—"

"Come along," Jem said impatiently.

"*Flying*— Hey!" Kerry was cold sober now.

"What's biting you?"

"*Flying Meteor.* Holy cats! That's a Kenton freighter!"

"Sure it is. And why not? Kenton ships're the best damn ships in space. Now will you come—"

"Not me. I don't ship on a Kenton ship. Not if it's the last job on Earth. Here's where I get off."

"Oh, you do, do you?" growled Jem. He shoved suddenly; and Kerry, off balance, went flying into the hold. The gangplank hauled away, the port slid shut; and the rockets went off with a roar and a splash. "You signed up for the voyage, son; and that's that."

THE *Flying Meteor* was bound for Ceres, largest of the asteroids, with a cargo of power drills, high explosives, detonators and miscellaneous mining equipment. Ceres was the port of entry for the entire asteroidal belt. Through its polyglot, roofed-in town of Planets streamed all the commerce of that newly exploited sector of space.

For many years since the first exploratory flights no one had paid much attention to the swarms of jagged, rocky little planetoids that filled the gap between Mars and distant Jupiter. They held no air, no vegetation and their bleak stone surfaces looked uninviting to pioneers in a hurry to get on to the more hospitable ground of the Jovian satellites. The Martial Council took formal possession of the four largest—Ceres, Pallas, Vesta and Juno—more for astronomical outposts than for purposes of exploitation. The others were left contemptuously alone.

That is, until a particularly inquisitive adventurer smashed head-on into an eccentrically rotating bit of flotsam not ten miles in diameter. If he hadn't been carrying a cargo of atomite at the time, it wouldn't have proved anything except that he was a bad navigator and that no funeral expenses were required. But when the space patrols reached the spot they found no hide or hair of adventurer or ship and about a million meteoric fragments in place of the asteroid. And every fragment was a chunk of solid nickel steel, generously interspersed with glittering rainbow flashes of diamonds, emeralds and rubies. The nickel steel on assay proved immediately workable—a find of the greatest importance in view of the depleted mines of Earth. Mars, curiously enough, had plenty of copper, but no iron. As for the precious gems,

they could be used in barter with the web-footed natives of Venus. Those childlike primitives took an immense delight in glittering baubles of that sort.

Whereupon there was an immediate rush to the Belt from all over the System. It was the kind of a rush that harked back to the first gold stampedes on Earth to California and the Klondike, to the initial space-hurtling to the Moon when rocket flight became a reality. And, as in all rushes, the pioneers, insufficiently prepared against the rigors of space and the dangers of the Belt, starved and suffered and fought among themselves and found death instead of riches.

Not every rocky waste held within it the precious alloy. Not one in a hundred, in fact. And the lucky miner, as often as not, had his claim jumped, his first load—blasted out with infinite pains—highjacked and his bloated body tossed into the void. If he survived the initial dangers, then he discovered that it took capital to work his find and transport the metal back to Mars and Earth. Lots of capital. And the men of wealth, like similar men of wealth throughout the ages, demanded so huge a slice of the take and their contracts were so cleverly complicated that the unfortunate prospector invariably found himself rather bewilderedly retired with a condescending pat on the back to the joy places that had mushroomed on Planets, there to rid himself of a modest pension as fast as he could.

Simeon Kenton hadn't come in with the first predatory rush of the men of wealth. He disapproved of their tactics and his disapproval, at first violent with expletives against such slimy snakes as Jericho Foote, of Mammoth Exploitations, took finally the cannier form of preying on *them*. By means of his superior resources and cleverer lawyers he formed holding companies, took assignments of seemingly worthless rights from disgruntled miners and then fought the men of wealth through every court in the System until they were bankrupt or glad to sell out for a song; he merged and bludgeoned and purchased until more than a third of the wandering planetoids were under his control by outright ownership or option. Mammoth Exploitations, his closest competitor and special *bête noire*, held no more than a fifth. Scattered smaller companies and individuals accounted for another fifth; the remainder were still in the public domain, subject to proper filing claims.

Kerry Dale soon found that life as a cargo wrestler was not all beer and skittles. Jem and his very suave companion—who proved to have been a space crimp and who discreetly disappeared to continue his trade after snaring Kerry—had been a trifle reckless with the truth. To call it practically the ship's guest during a trip required a peculiar sense of hospitality.

No sooner had the ship blasted off than they set him to work. And what work! Scrubbing and scouring and restacking bales and cases every time the freighter took a steep curve—which was often—and the loose-packed cargo obeyed the law of inertia and tried to keep head-on in a straight line; running errands for the officers and opening tins of food for the cook and *yessiring* even the rocket monkeys and hunting for non-existent left-handed ether-wrenches while the dim-witted spacemen snickered and grinned all over their idiotic faces.

Kerry had sobered fast enough. He demanded to see the captain at

once. The captain was a man of few words. He cut short Kerry's own flow of explanation. "Put this blasted swab into the brig," he roared, "without food or water until he's ready to work. And if he bothers me again, I'll make rocket fuel of him."

"Yes, sir," said Jem discreetly and yanked the indignant new cargo handler out of the captain's way before he could say or do something really rash.

"He can't talk to me that way," exclaimed Kerry. "I'm a lawyer and I'll see him and his blasted boss to—"

"Look, son," said Jem, who wasn't a bad fellow at heart, "don't get yourself into a lather. If you're really a lawyer—"

"Of course I am."

"Then you ought to know something about space law. You signed the articles and you're bound by them for the duration. A captain has power of life and death on a trip."

Kerry paused. "Yes, I know. I must have been drunk when I signed."

"You were," Jem told him feelingly. "The way you downed those pullas—"

Kerry brightened. "O. K., I'll be a sport. I'll do the work. But as soon as the trip is over, I'll tell that roughneck captain a thing or two."

"Better not," advised Jem. "You'll be under him for a whole year."

"*What?*"

"I told you you were drunk. That contract was Standard Form No. 6. One year on the spaceways."

Kerry's jaw went hard and his eyes blazed. "Old Fireball won't want *me* in his employ that long," he said grimly. "Not after what I had just got through telling him in his own office. In the meantime, Jem, bring on your work."

It was brought on in a way that surprised even that lithe, athletically fit young man. But he didn't complain and by the end of the voyage he was on good terms with most of the crew and particularly friendly with Jem. And even as he wiped smudgy designs on his perspiring forehead with the back of his hand he schemed and planned.

THE *Flying Meteor* had no sooner dropped into its landing cradle at Planets and discharged its cargo, and astcroidal leave been granted its crew for the space of a day, than Kerry Dale hustled over to the office of the Intersystem Communications Service.

A most superior young lady looked at his still-smudged countenance with a lofty air. She patted the back of her hair-do with violet-manicured hand and said *yes?* with that certain intonation.

"Never mind the act," Kerry advised. "I want to send a spacegram to Simeon Kenton, of Kenton Space Enterprises, Megalon, Earth."

The young lady was indignant. Imagine a low-bred cargo shifter talking to her like that! She tried to freeze him with a glance, but the smudged young man refused to freeze. Whereupon she stared pointedly at his grimy hands, his single-zippered rubberoid spacesuit.

"The minimum for a spacegram to Earth is thirty Earth dollars," she said frigidly. "In advance."

He grinned at her; and his grin somehow made her forget her superiority. "Don't let that get you down, sister," he smiled, leaning confidentially over the stellite desk. "This one's going collect."

"Oh!" she gasped, and the melting thing she called a heart congealed

again. "As if Mr. Kenton would honor *your* spacegram. As representative of the Intersystem Communications Service I must definitely refuse to—"

He leaned closer to her. "Don't—" he whispered.

"Don't what?"

"Don't refuse. Read Section 734, Subdivision 22, Clause A, of the Interplanetary Code. It says that should an officer or employee of any communications service engaged in the transmission, transference or forwarding of interspace messages refuse to accept any message properly offered for such transmission, transference or forwarding by any company, individual or individuals, the said officer or employee shall be liable to a fine of ten thousand Earth dollars or fifteen thousand Mars standard units, half of which shall be paid over to the aggrieved party. How would *you* like to pay that fine?" he asked her.

She was flabbergasted. A cargo wrestler, lowliest of spacemen, quoting law to her, with chapter and verse! Then she rallied the tattered remnants of her dignity. He must have read that in a communications office somewhere. The extract by law was posted prominently. She sniffed.

"That's silly," she said. "A message to be properly offered must be paid for."

"Sure! Kenton will pay for it."

"He won't," she retorted. "And, anyway, how do I know?"

"Section 258, Subdivision 6, Clause D, which says, in short, when a member of the crew of any spaceship is lawfully on voyage to any planet, satellite or asteroid, and an emergency arises, he may, at his employer's expense, send such spacegrams, televised communications or other messages as may to him seem proper for the resolving of the emergency. I, my dear young lady, am a member of the crew of the *Flying Meteor*, just landed; said *Flying Meteor* belonging, as you ought to know, to old Simeon himself." Kerry fished out his identification tag, exhibited it. "Now do you, or don't you?"

"I . . . I suppose so," she said weakly. She was getting a bit scared of this incredible space roustabout.

"Good!" He flung her a slip of paper. "Send this off. When the answer comes, send it on to the *Flying Meteor*, Landing Cradle No. 8."

By the time she started reading the message he was gone. As her eyes moved over the lines they became glassy, wild. She said: "You can't say anything like—" But she was talking to herself. The office was empty. In a panic she buzzed the visiscreen for her chief. He was out. All responsibility rested on her. Perhaps she should screen the main office on Mars. But that would take a few hours; and that terrible young man would quote another passage from the Code at her, relating to delays in transmission. Nervously she started the peculiar message on its way.

Simeon Kenton was engaged in another verbal bout with his daughter. It meant nothing. They both enjoyed it. Old Simeon fussed and fumed and Sally got her way. Which was as it should be.

This time it was about her getting a little space knockabout with a cruising range to the Moon. "It's ridiculous!" he yelled. "And downright dangerous. Why can't you use my piloted machine?"

"Because I don't like Ben Manners, that stodgy old pilot you insist on keeping. Manners, indeed! He hasn't the manners of an old goat."

Ceres didn't offer much entertainment for him—

Simeon was shocked. "Such language, Sally! I'm surprised. Where do you learn such—"

He saw her impish twinkle and stopped in time. "Anyway," he added hastily, "it's dangerous."

"You know I've a Class A license, dad. If the Space-Inspection thinks I'm competent enough to go to Jupiter, certainly I don't see why—"

The visiscreen buzzed. "Message for Mr. Simeon Kenton; message for Mr. Simeon Kenton."

Simeon flung the switch into receptor range. "O. K. Go ahead."

The Megalon operator of the Intersystem Communications Service appeared on the screen. He looked nervous. "It's from Planets, sir."

"Ha! Must be the *Flying Meteor*. Shoot!"

"It . . . it's collect, sir."

"The devil! Since when does Captain Ball send collect? Don't he carry enough funds?"

"Maybe there's trouble," Sally suggested.

"The devil you say!" Simeon was startled. The *Flying Meteor* carried a valuable cargo. "Well, go on there, you!" he roared into the screen. "Don't be keeping me on tenterhooks. What's it say?"

The operator was plainly ill at ease. He cleared his throat. "This . . . uh . . . message . . . uh . . . our company takes no responsibility for—"

"Who the blazes asks you to?" roared Simeon. "It's for me; not for you! Now, hurry up, or by the beard of the comet—"

The operator began to read hastily.

SIMEON KENTON,
KENTON SPACE ENTERPRISES,
MEGALON, EARTH.

DEAR OLD FIREBALL:

HA HA HA. SO YOU THOUGHT YOU FIRED ME? TAKE ANOTHER GUESS. BACK IN YOUR EMPLOY IN CREW OF *FLYING METEOR*. HAVING A WONDERFUL TIME WISH YOU WERE HERE. AND DON'T THINK YOU CAN FIRE ME AGAIN. I HAVE IRONCLAD CONTRACT FOR ONE WHOLE YEAR. I CAN'T STOP LAUGHING.

KERRY DALE.

Sally began to snicker as the operator gulped on and on. Simeon's face turned a mottled red. His angelic whiskers and the thin white wisps on his head grew so electric she could almost see the sparks jumping from one to the other.

"Stop!" he roared.

The operator stopped.

"Is he really back on your payroll, father?" Sally asked innocently.

He glared at her. "Quiet! Of all the insufferable impudence, the ratgosted, blatherskited ripscullions!"

"Father, your language! It's not even English!"

The operator said timidly. "Any reply, Mr. Kenton?"

Simeon whirled on the screen. "No!" he shouted. "I mean yes! Take this message. 'Kerry Dale, wherever the blazes you are, you're not—' "

The operator paused in his writing. "Uh—is *that* the address?"

"It ought to be. Bah! You know the blamedadded address, don't you? Then put it in and stop interrupting me.

KERRY DALE,
ET CETERA, ET CETERA.

YOU'RE FIRED AND I MEAN FIRED. TO BLAZES WITH YOUR CONTRACT! I'LL FIGHT YOU ALL THE WAY UP TO THE COUNCIL AND DOWN AGAIN.

KENTON.

"There, that will hold the young flipdoodle. Back in my employ, huh!"

"I wonder," murmured Sally.

"Wonder on."

"I wonder if he doesn't *want* you

to fire him. He looked like a pretty smart young man to me. In that case, knowing you—as who doesn't? —that would be just the kind of a spacegram to—"

Simeon looked startled. "By gravy, Sally, maybe you're right! Hey there!" he yelled into the screen. "Skip that reply. Take another, addressed:

CAPTAIN ZACHARIAH BALL,
FLYING METEOR,
PLANETS, VESTA.

HAVE YOU YOUNG SQUIRT IN CREW NAME OF KERRY DALE? IF SO REPLY FULL DETAILS.

KENTON.

A FEW HOURS later came the answer. Sally had waited for it. She was intensely interested. She told herself it was because she enjoyed watching her esteemed, lovable old parent fuss and fume, and because no one had ever dared stand up to him as this young man was doing. If there was anything deeper in her interest, she wouldn't admit it even to herself.

Captain Ball was brief and to the point.

KERRY DALE MEMBER OF CREW *FLYING METEOR*. CARGO HANDLER, STANDARD CONTRACT No. 6, SIGNED UP MEGALON WHILE DRUNK. GOOD MAN BUT ALWAYS ARGUING ABOUT RIGHTS. REGULAR SPACE LAWYER. SOON TAKE IT OUT OF HIM.

BALL.

Old Simeon rubbed his hands softly. His eyes gleamed. "Cargo handler, hey? The toughest, orneriest job in the whole System? Old Fireball, am I?"

He snapped the office of his lawyer in chief onto the screen.

"Yes, sir?" Horn inquired respectfully.

"About our employment contract, Form No. 6, how ironclad is it?"

Horn stroked his jowls complacently. "Not a loophole, sir, from our point of view, that is. We just redrafted it about six months ago. The Kenton Space Enterprises binds the employee to everything and is bound practically to nothing."

"Can the employee break it?"

"Break it!" Horn chuckled. "Not unless he wants to pay triple his wages as and for liquidated damages and be enjoined for the space of five years thereafter from engaging in *any* gainful employment. Oh, it was carefully drawn, I assure you."

Kenton rubbed his hands very hard now. "Good! Excellent! I must say it was about time you began to earn that outrageous salary I'm paying you."

Horn preened himself. Coming from Simeon Kenton, this was indeed praise! "Well, sir, I'm glad you think—"

Suspicion glowed suddenly in Simeon's eye. "Hey, wait a moment. Did *you* personally draft that contract?"

Horn deflated. "Well . . . uh . . . that is—" he stammered.

"Ahhh! It was that dingdratted Dale, wasn't it?"

"Well . . . uh . . . you see—"

But Kenton had already wiped him off the screen with a violent gesture.

"There, you see," Sally exclaimed happily. "Everything's worked out just fine. Kerry Dale's back in your employ whether he wants to or not. All you have to do is put it up to him. Come back to your legal department, *with* a raise, or stay on as cargo handler. Surely he'll—"

She stopped. When her parent looked as unbearably angelic as he did right now, he had something particularly devilish up his sleeve. She was right.

"Oh, no, child. Kerry Dale is

staying right where he is. He made a contract and he's going to live up to it."

Sally felt suddenly sick. This was no longer fun. The thought of that very determined, intent young man, whom she had seen only once and who hadn't even looked that once at her, wrestling with staggering loads and living in grubby spaceship holds for a year did things inside of her.

"You're taking a mean revenge, dad," she exclaimed. "You can't—"

He put his hand against her cheek, stroked it gently. His eyes softened. "You like him, don't you, child?"

"No—that is, yes—I don't know. He didn't even *see* me."

"Let me handle him, Sally. It will be a good experience. If he's got the stuff in him, this year will bring it out. There's nothing like space for making or breaking men. If he breaks, then we'll know—you and I. If he doesn't, then we're both sure about him."

KERRY DALE sweated and strained at the huge chunks of ore that were rapidly filling the hold of the *Flying Meteor*. The sweat streaked down over his half-naked body and dripped from under his rubberoid pants. As he heaved and juggled, he wondered. Three days had passed since he sent that impudent, carefully deliberated spacegram to Old Fireball and nothing had happened. It didn't sound right. By all accounts that most irascible old man should have promptly exploded and fired him by return message—which was just what Kerry had counted on. A horrible thought came to him. Had the girl in the office double-crossed him and not sent off the spacegram? His jaw hardened. "If she hadn't, he—

Bill, the shipboy, came whistling into the hold. "Hey, Kerry, the cap'n wants to see you. Gee, you must of done somethin' terrible!"

Kerry's fellow handlers stopped work, made clucking sounds of pity. When the captain sent for one of their kind, it meant only one thing—trouble!

Jem said anxiously: "For God's sake, Kerry, whatever it is, don't try to talk back, or you'll land up in the Ganymedan hoosegow. And that ain't no place to be. I've been there," he added feelingly, "so I know."

But Kerry threw down the piece of ore he was handling with a contemptuous clatter. Exultation filled him. He laughed at their anxiety. "So long, fellow slaves!" he waved to them. "I'm through; washed up. I've been waiting for this call. Next time you see me, call me 'Mister.' I'll be a free man, free of Old Fireball and his lousy ships. *Bon voyage, mes pauvres.*"

They stared after his swaggering exit. Jem shook his head and looked anxious—

Captain Ball greeted his cargo handler with a smile. It was a grim smile, but Kerry didn't note that. All he saw was the spacegram in the captain's hand.

"This is for you, Dale," purred the captain. "Direct from Mr. Kenton himself."

"Direct from Old Fireball himself?" said Kerry jauntily. "Very sweet of him to fire me in person. *Tsk! tsk!*"

He spread out the spacegram; read:

DALE:

FIRE YOU? NOT AT ALL. GLAD TO HAVE YOU IN EMPLOY AS CARGO MONKEY. SUITS YOUR TALENTS PERFECTLY. ONE WHOLE YEAR!

KENTON.

Kerry was shocked; more, he was dumfounded. The old scoundrel! He could see him laughing fit to kill in that office of his. He had outsmarted Kerry. A whole year doing this rotten, jumping job! He'd be damned if—"

Captain Ball said grimly: "It may interest you to know that I also received a spacegram. I'm to make you toe the mark." He laughed nastily. "As if I had to be told that. Now get back to your work, you ether-scum, and don't let me catch you laying down on it or I'll put you in irons with extreme pleasure. Git!"

Kerry got. It was a much sadder and wiser young man who came back into the hold to meet the queries first, then the gibes of his shipmates.

"*Mister* Kerry Dale!" mimicked one. "He ain't gonna be no slave no more, nohow. No, siree. *He's* gonna tell Captain Ball and Old Fireball, too, just where they get off. Yes, sirree."

"Lay off the lad!" commanded Jem sharply.

Kerry grinned painfully. "Let them talk, Jem. I've got it coming to me. I thought I was smart." Then his jaw squared. "But I'm not through yet, not by a long shot."

"Good lad!" approved Jem. "Now about that load over there—"

THE *Flying Meteor* cleared for Earth; picked up another cargo, returned to Vesta. Kerry had never worked so hard in his life. He gained a new respect for the brawny spacemen and their ability to take it. He was fast becoming one of them himself. The rough work hardened and deepened him and he gained the saddle-grained tan that was the hallmark of all the men of space.

Captain Ball rode him; but there was no persecution. No excuses were permitted; no extra shore leave granted him, as sometimes happened to the other members of the crew. The letter of the contract was religiously upheld.

He didn't have a single comeback, Kerry reflected bitterly. He had drawn that blasted contract only too well; so well that even *he* couldn't find a single loophole in it.

The first resentment passed. Old Fireball had hoisted him with his own rocket, and that was that. But he was determined before the year was up to make the chortling old man regret the day he had triumphed so easily over him. Just how he'd do it, he didn't know as yet. But his brains worked overtime, seeking opportunities.

In Megalon he saw a telecast. It was the only recreation he could manage in the six-hour shore leave his contract called for. The feature —a rather dreary tale of adventure on a still-unexplored Saturn—bored him. The way these writer chaps dress up space life! I bet not one of them ever set foot on a spaceship. Then the news program flashed on:

"And now," said the announcer, "we'll show you Miss Sally Kenton, the beautiful, high-spirited daughter of Simeon Kenton, and sole heiress to all his millions. She's about to take off for the Moon in her new, special-job flier. It's a honey, as you'll see immediately for yourself; and—I don't mind telling you—so is she. In addition to her other accomplishments Miss Kenton is the only woman holder of the Class A Flight License."

"Huh!" snorted Kerry in the depths of his seat. "Her old man's pull got her that. And why is it that every girl who's born to millions is beautiful, according to the announcers. I bet she's cross-eyed and bowlegged and—"

"Shut up!" Jem said genially. They had gone together. "Did you ever see her?"

"No; and I don't want to."

"Well, I have. On the telecast, that is. But here she is."

The rocket field swam into view. The one-seater flier gleamed and sparkled with sleek stellite. It was a beauty. But Kerry jerked upright in his seat at the sight of the girl who stood at the open port. Her windblown hair rippled in the sunshine; her piquant face was smilingly turned toward the visiscreen.

"Well?" murmured Jem admiringly. "Cross-eyed, hey? Bowlegged?"

"Holy cats!" breathed Kerry. "I . . . I thought she was Old Fireball's secretary."

Jem snorted. "*She* don't have to work. Even if she wasn't born to money. Not with those looks!"

But Kerry wasn't listening. Even after the newscast shifted elsewhere he sat in a daze. He had dreamed of that girl. Even though they hadn't said a word to each other. And now his dreams collapsed. Aside from everything else—he had used violent hands on her father, and even more violent words. Oh, well, the hell with it! Might as well be hung for a wolf as for a sheep. He'd show the precious pair of them a thing or two before he was through.

But two more trips intervened, and a month had passed; and still he was a wrestler of cargoes. He cudgeled his brain and he utilized every spare shore leave to seek opportunities for striking back at that smug Old Fireball. He drew only blanks.

THEN, back at Planets again, there was a hitch. They were due to pick up an especially fine load of high-grade electromagnetite. Back on Earth this alloy of rare metals cost a hundred dollars a ton to produce and industry clamored for all it could get. The new atom-smashers that powered the world's work were lined with the alloy. Nothing else could withstand the terrific explosions of bursting atoms.

Only two months before, however, one of Simeon Kenton's exploration expeditions had found an asteroid on the very outer verge of the Belt, not far from Jupiter itself, which was practically sheer electromagnetite. The asteroid was small, yet the experts figured it at sixty thousand tons of workable metal. At a hundred dollars a ton—

"Lucky stiff!" stormed Jericho Foote, of the rival Mammoth Exploitations, and sent a ship posthaste to chart every asteroid in the vicinity of the find. The expedition came back with sad news. There were plenty of asteroids, all nicely mapped and orbits plotted; but nary a one was anything but useless burnt-out slag and rock. And there the matter had dropped.

This was the first load that had been mined. And the fat-bellied, slow-moving scow that was freighting it to Vesta for transshipment to Earth on the *Flying Meteor* had broken down in space about a million miles from Vesta. A radio flash came in, calling for a tow. A towship, with special magnetic grappling plates, started out. It would take almost a week before the crippled ship would come in.

Captain Ball swore deeply, but there was nothing else to do but wait. Perforce he gave his crew shore liberty. He was so upset by the mishap that he forgot to exclude Kerry Dale from the coveted leave.

So that Kerry found himself wandering the inclosed streets of Planets, seeking something to do. There was

plenty to do, if you cared for that sort of stuff. Joy palaces, drink dives, gambling layouts, honkatonks, razzledazzles—all the appurtenances of a System outpost calculated to alleviate the boredom of space and wrest away from its wayfarers the hard-earned pay they had accumulated.

The crew of the *Flying Meteor* went to it with whoops of joy and a spray of cash. Even Jem, ordinarily sober and steady, fell for the lure.

"Come along, Kerry," he urged. "It will do you good. Cap Ball's liable to wake up any moment to the fact that you're included in the leave."

Kerry shook his head. "Not me, Jem. I still remember how I got so drunk I didn't know what you gave me to sign."

Jem looked pained. "You aren't holding that against me, lad?"

"Not at all. That was your job. But I've got other fish to fry; and I've a hunch that somewhere on Vesta I'll find both fish and frying pan."

So he walked the streets, heedless of the siren calls from overhanging windows, thinking hard. He simply *had* to get back at that old rascal, Simeon Kenton. But how?

This discovery of his—electromagnetite? Six million dollars worth of stuff dumped into his lap. Could anything be done about *that?* He couldn't see how. The claim of ownership to the asteroid had been filed. Properly filed, without doubt. Kerry remembered the meticulous care they had used back in Horn's office to check on every claim. Horn was a pompous old ass, but he knew about mining claims. There'd be nothing there.

Still—it wouldn't hurt to take a look. Might as well, in fact. Planets wasn't built to provide distractions for men of his stamp. So his feet moved him rapidly toward the Bureau of Mining Claims and Registrations.

VESTA had jurisdiction over the entire Asteroid Belt. Every claim, every title, had to be registered there to be valid.

Dale walked into the Records Department, asked to see the file on Planetoid No. 891. This was the way Kenton's find was listed—the jagged little bit of metal was too tiny for a name.

A can of film was handed Dale and he was given a projection room in which to examine it. Carefully he studied the elements of the claim on the projection screen, running it over and over.

After an hour, he gave it up with a sigh. The chain was air-tight and space-tight. Horn had done a proper job on it. Old Fireball would hold title until Kingdom Come. Every possible contingency had been provided for. Prior liens, mineral rights, space above and core beneath.

Glumly he turned the can back to the clerk. The clerk said conversationally: "Lucky guy, that Kenton."

"Yes."

"Jericho Foote's been taking a fit. He must of spent a cool hundred thousand on that expedition of his alongside. All he brought back for it was a beautiful chart of that whole sector of space."

Kerry said suddenly: "Got it here?"

"Sure. All those things go on file. Want to see it?"

"Might as well. I've got nothing else to do."

The clerk examined him curiously. To outer appearance, in his rubberoid suit and calloused hands, Kerry was just another cargo wrestler. Nothing else to do in Planets, huh?

Feeling a bit offended in his local pride the clerk withdrew, returned with a larger can.

Kerry took it into the projection room.

It was a beautiful chart, he acknowledged. Foote had sent along one of the best cartographers in the System. Every sector was carefully plotted, every asteroid, every speck of space dust put in its proper place and the elements of its orbit set forth in measured tones.

Idly, Kerry checked some of the orbits on a scratch pad. Back in college, before he had gone in for law, he had been pretty good at space mathematics.

He plotted a few of them, for no special reason, but just to see if he still knew how to do them. He did.

The courses were pretty complicated, what with Jupiter, Mars, the Sun and all the other asteroids pulling on each other. The orbits did loops and curlicues and led nowhere in particular. He was about to give it up, when he came across a somewhat larger bit of flotsam, perhaps a mile across at its greatest diameter. According to the accompanying data it was an arid waste of congealed lava, with a pitted, glassy surface. Nothing on which to waste a second glance. Yet there was something curiously familiar about the elements of its orbit. He stared hard at them. Where had he seen similar ones?

He riffled through the sheets of his scratch pad, stopped suddenly at his figures on Planetoid No. 891. There it was. Allowing a differential angle of six degrees to Plane Alpha the two sets of elements might have been twin brothers.

An idea groped in the back of Kerry's head. He began to plot the course of the second asteroid, No. 640. His pencil raced and his brain raced. His excitement mounted as the complicated elements unfolded. Checking each set against those of No. 891, it seemed—it seemed—

The last equations were down, the spacegraph drawn. Feverishly he superimposed the twisting curve on that of No. 891. If his first approximation was correct, the two asteroids should collide on December 17th, Earth Calendar. It was now December 13th!

He went to work again rapidly, taking successive approximations. Then he was staring blankly at the curves. The sweeping lines approached each other, closer, closer, so close that they practically brushed; then swung away in widening loops to separate sectors of space. Practically brushed each other; but not quite. His first approximation had shown actual contact. The final figures disclosed a distance of three miles at the point of closest approach!

Three miles is not much; but when one deals with two bits of rock, one not more than two hundred feet in diameter, and the other about a mile, and both hurtling along at speeds of several miles per second, three miles becomes a yawning, unbridgeable chasm. There would be no collision!

The vague idea that had been burgeoning in Kerry's head collapsed. Another scheme to do something about Old Fireball's victory over him died a-borning. He was licked again.

He sat there, staring at the figures as though he could by the mere act of concentration shift them just the slightest. Three measly little miles! So near and yet so far. If only there was a way—

He whooped, and the echo in the confined projection chamber startled him. It was a long-shot gamble. There were half a dozen incalculable factors, each of which had to fall

neatly into place; but he'd be damned if he wouldn't try it.

Very casually he returned the can of film to the clerk. Even more casually, though his heart was hammering, he asked for the Claims Registration Book.

His finger stopped at Planetoid No. 640. The registered owner was one Jake Henner, and his official address was the Gem Saloon, Planets, Vesta.

"Got what you were looking for?" asked the obliging clerk.

Kerry found it hard to keep his face blank. "Wasn't looking for much," he said. "Thanks!"

BUT OUT in the street Dale hailed a swift little gyrotaxi. "Gem Saloon!" he snapped. "And never mind the speed limits."

"What a break! What a break!" he exulted to himself. "Imagine if the owner had been old Kenton or Mammoth or some guy who lived on Venus!"

"Here y'are, buddy." The gyro-driver came to a halt. "The Gem Saloon in four minutes flat. And I got me a fine, too. Doing a hundred an' twenty on a city street. See up there!"

Kerry looked obediently at the little oblong screen above the dashboard. On it, flashing neatly, was imprinted a summons for violation of the traffic laws. The photoelectric cells at each crossing had clocked the gyro's speed. As it passed the legal limit, the automatic mechanism recorded the offender's license, sent out the impulses that printed the summons in the offender's cab.

"What'll the fine be?"

"Ten bucks."

Kerry fished in his pocket. "Here it is, and the fare and a tip. It was worth it."

"Gee, thanks!"

The Gem Saloon was on the outskirts of Planets. It wasn't one of the higher-class razzledazzles. It was just a cheap joint in a cheap neighborhood. Which, strangely enough, pleased Kerry no end.

He went in. A couple of shabby men were drinking rotgut brew. A frowsy-looking bartender with a dirty, slopped-over jacket was lackadaisically leaning an elbow on the bar. Business was not so good.

"Where can I find Jake Henner?" asked Kerry.

The bartender did not even shift his glance. "You're looking at him right now, buddy. An' I don't mind tellin' you meself he ain't much tuh look at."

"Not so bad, Mr. Henner," Kerry said critically.

"Just call me Jake. If it's a drink you want, speak up. If it's money, you're wasting your time."

"I'll take the drink; and maybe I'll *give* you money, Jake."

The man perked up. He slopped some firewater into a dirty glass, set it before Kerry. "Say, mister, don't give me heart failure, speakin' so easylike about money. They's gonna throw me outta here soon if I don't pay the taxes."

"You registered Planetoid No. 640 in your name, didn't you?"

The eager look died. "Yeah!" he said bitterly. "Coupla years ago me an' a pal got ourselves a grubstake an' went prospectin'. Didn't find a damn thing. The pal ups an' blows hisself tuh bits on that blasted little speck o' nothing. There wasn't anything left tuh bring back tuh bury, so I sorta registered the rock for his sake, me bein' sentimentallike."

"And a very good sentiment, too," approved Kerry. "You wouldn't want to sell that bit of sentimental desert for fifty bucks, cash?"

Jake looked suddenly suspicious.

"Whoa there!" he exclaimed. "There ain't been somethin' found there what I don't know about?"

"Don't be silly," Kerry told him severely. "Did *you* find anything? Did the Mammoth crowd who landed there find anything?"

"No." Jake scratched his head. "Whatcha want it for, then?"

Kerry leaned over the bar; whispered. "I'm a spaceman, see! I get chances to pick up things here and there; and I need a place to cache the stuff until I can get it away safely. Of course, if you don't want to sell No. 640, that's all right with me. It's convenient, but there's a hundred other asteroids just as convenient."

"Make it two hundred bucks."

"Seventy-five."

"One fifty, mister, and the deal's closed. So help me, I need—"

"One hundred," Kerry told him firmly, "and not a penny more. It's found money for you."

"Gimme!"

"*After* you sign the proper papers, my dear Jake."

TWO HOURS LATER Kerry was the sole and legal owner of Planetoid No. 640, with all the rights, appurtenances, hereditaments and easements accruing and adhering thereto. Step No. 1!

Now for the next and more difficult step!

He reported to Captain Ball.

The captain's eyes gleamed. "Oh yes, Dale. I had completely forgotten. You've been sneaking extra shore leave. Your contract calls only for twelve-hours leave for each week in port. You're already overdrawn, so—"

"Kenton Space Enterprises ought to thank its lucky stars I took the time I did," he interrupted.

The captain stared. "What do you mean by that?"

"Just this. I happened to wander into the Registration Office. Looking at . . . er . . . orbital data is a hobby of mine. Used to be good at mathematics; and I like to keep up my figuring."

"Come to the point."

"In due time, captain. Being a loyal employee of Kenton Space Enterprises, Unlimited, I naturally looked at our Asteroid No. 891 first."

The captain grunted suspiciously.

Kerry paid no heed. "And being properly curious about Mammoth Exploitations, our hated rival, I looked at their futile charts if only to get a laugh.

"Hm-m-m!" said the captain. "What's your bloody schoolwork got to do with me?"

"I'm telling you, captain," Kerry smiled sweetly. "If you, or anyone else, would wish to calculate the orbits of our precious asteroid and of Planetoid No. 640 in the same area, you or he would discover, as I did, that they intersect simultaneously on December 17th. And that intersection, Captain Ball, means *smash* for almost six million dollars worth of firm property, not to speak of the lives of the forty-odd men who are mining the stuff."

Captain Ball said hoarsely: "If this is your idea of a practical joke, Dale—"

"I told you; get the company's experts to check me. There are duplicate charts at Megalon. Tell them to check No. 891 against 640. But, remember, December 17th is only four days away."

The captain was a man of action. "I intend to," he said grimly. "And Heaven help you if you're trying to make me look like a fool!"

But Kerry Dale obviously was not. The ether surged with space-

grams. A frantic message came from Simeon Kenton. Working at top speed, his experts had taken the charted elements of the two asteroids, as Kerry had suggested and, sure enough, on December 17th they would meet in head-on collision.

"Get every man off No. 891," jittered Kenton. "And do something, do anything, to shift that infernal bit of rock away. Six million dollars!"

The captain called Kerry into conference, as Kerry thought he would. His face was a black thundercloud.

"Easier said than done," he growled. "The *Nancy Lee*'s bust in space. All they've got out at No. 891 is a floating shed to house the miners until she comes back. Even if I sent them a radio, they couldn't get away."

"The *Flying Meteor*, if it starts fast, could get there with some hours to spare," Kerry pointed out.

"I suppose we could," he admitted. "But how about old Kenton's other instructions? What does he think I am—God? I suppose he thinks all I got to do is slip a tow chain around an asteroid, and haul it out of harm's way. Yet if I don't do something, he'll go ranting and tearing around, and I'll be in the soup."

In his unhappiness the incongruity of his thus complaining to a lowly cargo wrestler did not strike him.

"I've an idea, captain, which may or may not work," Kerry said quietly."

THE CAPTAIN was ready to grasp at straws. Sometimes Old Fireball expected the impossible from his men, and when they didn't or couldn't deliver they heard from him plenty. And it *was* six million bucks.

"What is it?" he asked eagerly.

Kerry frowned as if in deep thought. "The total mass of No. 891 is only about eight hundred thousand tons, isn't it?"

"Well?"

"A not impossible amount of power, applied tangentially and in the direction of the orbit, could shift it slightly from its course. It wouldn't take much of a shift to avoid a collision."

"True enough," Ball admitted. "But where's the power coming from, and how is it going to be applied?"

"You forget No. 891 is almost solid electromagnetite. If we can set up a powerful countermagnetic field in the immediate vicinity—"

The captain's face cleared. "By Heaven, Dale, you've got something there. Our magnetic tow plates."

"Yes, sir."

"But how much juice would we need? It would be a damn delicate job to give it the right boost."

"Damn delicate, captain," Kerry agreed. "I'll do the figuring, but there are so many complicating factors the whole thing will be a gamble."

"Let it be. We can't lose anything by trying." Captain Ball pressed buttons. Men's faces appeared on the visorscreen, gave way to others. He barked orders. Rush relays of storage batteries on board, additional power units and booster cells. Televise No. 891 to prepare for instant evacuation. Fill all fuel tanks. Stand by for instant take-off!

He turned to Kerry, stroked his chin. He cleared his throat. "By the way, Dale; about your job. I don't think it will be necessary for you to do cargo hustling from now on. Move your dufflebag into the bow cabin. You're acting third officer."

"Thank you, captain," Kerry

acknowledged gravely. Not until he was safely out of sight did he permit himself a grin. Everything was working out far better than he had dared hope.

The first hurdle had been the experts back on Earth. They had made the very mistake he had prayed they would; the same one he had first been guilty of. In their hurry, and because he had deftly focused their attention wholly on the two small asteroids immediately involved, they had overlooked the concomitant gravitational pulls of the other small bodies in the vicinity. These were charted with any degree of exactitude only on the Mammoth map. Foote had filed a copy on Vesta because it was the law. Duplicate filing on Earth was a courtesy, and Foote had been in no mood for courtesies.

The second hurdle had been to get Captain Ball to follow his suggestions. Kenton's explosive spacegram, with its seeming grant of unlimited authority, had unwittingly helped.

THE *Flying Meteor* hurtled the void to No. 891 in three days flat. They found a bewildered crew of men huddled in the captive shelter, anchored to the rushing little segment of purplish metal by a steel chain, and holding its distance by means of a weak repulsive current. All their tools and equipment had been salvaged, and the deep pit in the asteroid showed bare and forlorn.

The transfer of men and materials into the capacious hold of the *Flying Meteor* was a matter of hardly two hours. Every instant was precious. They could not see the oncoming No. 640. It was still almost half a million miles away, and its mile-wide dullness of dark lava could not be picked up in the deep confusion of the Belt. But they knew it was there and that, in less than twenty-four hours, the two bits of space wreckage would crash. Dale had said so; and he had been confirmed by the men back home.

"Have you worked out the amount of power we need, Mr. Dale?" the captain asked anxiously. "And at what specific point it's to be applied?" It was *Mr.* Dale now, as became a newly appointed officer.

"Yes, sir." Kerry thrust a sheet of figures at him. "But remember, sir," he warned, "I can't guarantee they'll do the trick. Space here in the Belt is full of conflicting pulls and repulsions. I had to disregard most of them, and pray that they cancel themselves out."

"I know; but we've got nothing to lose by trying. They're due to crash, anyway. Take your figures below to Mr. Carter, and let him get the necessary power up."

Kerry delivered the message. Meanwhile the ship had moved on No. 891's tail, and jockeyed into the exact position he had calculated. Kerry grinned; then grew a bit worried. He had covered himself against seeming failure; which, in fact, from his point of view, would be complete success. For the data he had laboriously compiled would, if everything went right, give just sufficient of a fillip to No. 891's tail to send it delicately grazing against the still invisible No. 640.

But would everything go right? The slightest bit one way would thrust them wholly untouched past each other; the slightest bit the other way would mean a head-on collision, with total destruction of the two compact little bodies. He didn't want that, either.

The power surged and throbbed in the ship's stout steel plates. The en-

gines roared and the boosters thrummed their song. Long, pencil streamers of flame darted from the rocket tubes, checking, accelerating. They were a bare two miles behind the asteroid, itself no larger than the ship, and at the speeds they were traveling, the slightest deviation might mean a terrific crash.

Magnetic currents flowed and crisscrossed the gap. Waves of repulsion that kicked the big freighter, by much the lighter or the two straining forces, right off its course. Each time Carter, the chief engineer, did miracles with the rocket tubes to get them back into line.

The crazy gyrations of the pursuing ship were obvious to everyone on board. But the opposite reaction on the purplish gleam of plunging metal was not so obvious.

THE HOURS PASSED, and still no discernible effect could be observed. It was impossible, with the instruments on board, to detect the infinitesimal shift in the angle of flight which was all that was required.

Asteroid No. 640, the villain in the piece, hove into view. It was coming at an acute angle to its prey, cutting sharply in front. Would they collide? Would they not? Would there be a smash? Would they only graze? If they grazed, would they stick; or sheer off again? Questions that tortured Kerry as he watched eagerly. His whole future depended on the answer.

Closer and closer they rushed on each other, with the *Flying Meteor* like a watchdog snapping at the heels of the smaller one. Closer and closer, while the power surged and repulsions leaped across the void. All hands on board pushed and shoved at the portholes, straining their eyes and holding their breaths. Six million dollars worth of precious metal hung in the balance!

Closer! Closer! A cheer went up. Jem yelled excitedly: "They're going to clear!"

Kerry felt a little sick. They *would* clear. He had miscalculated. A decimal place, perhaps, had gone wrong; some force had not been taken into account. Oh, well, he'd get the honor of having saved the asteroid. Old Fireball would have to be properly grateful. But that wasn't what he wanted. He wanted to stand up to the man, not come crawling to him with gifts in his hand.

A great groan went up. Kerry opened his eyes. He had involuntarily closed them.

The two asteroids, one so relatively large it almost swallowed the smaller, seemed to hang together. No. 891 shivered and dipped. It turned inward.

For one terrible moment Kerry was in agony. They would crash. He, personally, in his anxiety to outsmart Simeon Kenton, had blown to smithereens immensely valuable metal, important to the industries of the System.

Another cry echoed in the hold of the pursuing ship. The two small planetoids, of unequal size, trembled together. There was a little puff of smokelike lava dust that rose outward in a cloud; the heavier metal of No. 891 ground and scraped tangentially along the surface of No. 640; then both space-wanderers nestled snugly together and rushed on a swerving course, held by mutual pull and the inertia of their common speed.

Captain Ball unbent so far as to shake Kerry's hand violently. "Grand work!" he crowed. "No. 891 is absolutely undamaged. There's a groove on No. 640, but what the hell!

It's just a bit of waste lava. We could leave things as they are; or get some tractor ships from Vesta to help separate them."

"Not bad!" Kerry agreed quietly. "But I think we'd better get back to Vesta and send for instructions before you do anything."

"Of course! I intended that. But you've done a swell job, Mr. Dale. Simeon Kenton will be tickled."

How tickled, the worthy captain had no means of knowing at the moment.

For, once back at Planets, Kerry hurried ashore, filed certain affidavits with the startled authorities, then sent a spacegram addressed to Simeon Kenton, President, Kenton Space Enterprises.

It was short and to the point:

AS OWNER PLANETOID No. 640 MUST DEMAND DAMAGES MY PROPERTY DUE TO FALL OF PLANETOID No. 891 UNDERSTAND YOU OWN. ADVICE IMMEDIATELY IF YOU'LL PAY BEFORE SUIT.

DALE.

Back came the blistering reply:

DALE,
PLANETS, VESTA.

YOU'RE DAMN FOOL AS ALWAYS. WAS GOING TO PAY REWARD AND OFFER BIG JOB. NOW YOU CAN GO TO HELL. YOUR BLITHERING ASTEROID VALUELESS, DAMAGE WORTH SIX CENTS. CASH EN ROUTE. WILL FILE COUNTERCLAIM AS SOON AS SEPARATE THE ASTEROIDS AND DETERMINE DAMAGE TO MY OWN.

KENTON.

Kerry's grin was a positive delight. Space surged again.

KENTON,
MEGALON. EARTH.

THANKS FOR THE COMPLIMENTS. SIX CENTS REFUSED. WHAT DO YOU MEAN *YOUR* ASTEROID? No. 891 *MY* PROPERTY. READ SECTION 4 ARTICLE 6 OF SPACE CODE. WHO'S DAMN FOOL NOW?

DALE.

Back on Earth old Simeon went into a veritable ecstasy of explosive anger. His epithets burned holes in the office furniture, and melted the lucite walls. Even Sally was startled, though she had thought herself thoroughly immune to her estimable ancestor's language.

"What's the matter, dad?" she queried.

He danced up and down the length and width of the office. "That dodrotted, incinerated, langasted skibberite you think's so grand! Look at this now! Look, I tell you!"

"Don't yell so," she reproved. "You'll break a blood vessel." She

took the spacegram from his trembling fingers. "Hm-m-m!" A little smile made impudent curves of her lips. "Have you read Section what-is-it yet?"

Old Simeon glared at her. He slammed open the visorscreen.

"Horn," he barked, "what's Section 4, Article 6 of the Space Code say?"

"Well . . . uh . . . offhand I don't know, but—"

"Oh, you don't, don't you? You have to look it up, do you? I bet that ding-the-ding-ding Dale didn't have to look it up. He had it at his fingertips. Go on, look it up! Don't stand there like a bleating doodlebug."

Horn swallowed hard. Within a minute he was back on the screen.

"It reads, sir, as follows:

"When in the event that a freely moving body in space, not artificially produced or manufactured by man or machine, shall fall or in anywise impinge upon the surface of a planet, satellite or asteroid, the said falling body so impinging shall forthwith become the property of the record owner of title to the surface of such planet, satellite or asteroid upon which the same has fallen as aforesaid."

Kenton broke into a delighted chuckle. "Ha! Got that blasted skalawoggle on the hip. Thought he was smart, huh! *I've* got an asteroid, too. I can claim *his* fell on mine." He rubbed his hands. "I'll take him all the way up to the highest courts; I'll spend thousands to—"

Horn scowled down at the book in his hands. "If I might venture to suggest, sir—"

"Go on and suggest, Horn." Old Simeon was in high good humor. He even smiled benevolently.

"There's a definition here of a falling body, sir. You didn't give me a chance—"

"Hah! What's that?"

It says:

"A falling body is defined as the lesser in mass of two bodies when two freely moving bodies in space collide or impinge on each other in any manner or form."

"I took the trouble to look up the respective masses, sir. Planetoid No. 891, the one that . . . ahem . . . *used* to belong to us, has a gross of seven hundred ninety-two thousand three hundred and eighty-one tons. Planetoid 640, sir, has a gross of twelve million five hundred eighty-eight thousand four hundred and thirty-seven tons."

Sally said: "This Kerry Dale seems to have you there, dad."

"Why . . . why," he gasped, "it's outrageous; I won't have it. Six million dollars of my hard-earned money going to that snipperwhopper! Can't you *do* something, Horn?"

"I'm afraid not. The law is clear. I'd suggest a settlement."

"Settlement be darned!" he stormed. "I'll—"

"You'd better, dad," Sally advised. "After all, six million—"

He groaned, sputtered and gave in. He composed a spacegram that he thought was a crafty masterpiece:

DALE,
PLANETS, VESTA.
YOU'RE A SPACE ROBBER AND A SCOUNDREL. WILL START SUIT AT ONCE AND WIN. TO AVOID SUIT I'LL PERMIT YOU TO SETTLE. OFFER YOU FIFTY THOUSAND CASH IN RETURN FOR GENERAL RELEASE. WILL PAY EXPENSES OF REMOVING MY PROPERTY. ANSWER AT ONCE OR SUIT GOES ON FILE.
KENTON.

IN DUE TIME came the answer:

O. K. GIVE ME HUNDRED THOUSAND AND WE *BOTH* SIGN RELEASES.
DALE.

"Ha!" chuckled Simeon. "I thought that would scare the pants off him. For a measly hundred thousand he gives up clear title to six millions. Quick, Horn, draw the releases and shoot them on to Vesta with a draft for the money before the young fool recovers from his fright."

The releases passed, were signed; the draft honored.

Simeon told his daughter happily: "There, you see, my dear, no one can get the best of your father. That young—"

A most agitated expert burst into the office; in his excitement forgetting even to announce his coming. He was Bellamy, chief expert of the Kenton Scientific Staff.

"A . . . a most terrible mistake has been made," he stammered, "a-about th-that asteroid."

"Ah!" murmured Sally to herself. "Maybe Kerry Dale wasn't so foolish as darling dad thought."

"What about it?" snapped Kenton impatiently.

"We miscalculated the orbits. We were so . . . ah . . . rushed, we didn't have time to send to Vesta for a copy of the Mammoth chart. I . . . I thought of it only yesterday. With the new factors on hand, I recalculated the elements."

A terrible suspicion grew on Simeon.

"They . . . they wouldn't have met," Bellamy went on unhappily. "They would have cleared by three miles if the *Flying Meteor* hadn't pushed them together."

Sally ran to her father. For once she was seriously alarmed. He seemed to be having a stroke. His face purpled and his breath wheezed. "I'll sue him," he gasped. "I'll get my money back. I'll bankrupt him for fraud, conspiracy; for—"

"Wait a minute, dad," said Sally. "You can't."

"Why can't I?"

"You gave him a general release."

For a long moment old Simeon glared at her. Then he fell weakly into a chair and a certain awed admiration came into his eyes. "The dingdasted young good-for-nothing! No wonder he sold out so fast and so cheap. He outsmarted me . . . *me*, Simeon Kenton." He rose. "Daughter," he said impressively, "mark my word, that young man will go far!"

But Sally wasn't there any more. She had slipped quietly out. She wanted to send a private spacegram of her own. It would read:

KERRY DALE,
PLANETS, VESTA.
CONGRATULATIONS! KEEP UP THE GOOD WORK!
SALLY KENTON.

THE END.

TO FIGHT ANOTHER DAY

By Robert Moore Williams

Seeking the mystery of Earth's desertion, the three men found a clue—and an answer to the cowardice that had made men flee instead of fighting.

Illustrated by Schneeman

"It may be that danger lurks here still," Var Shawn said. "I do not know. No one knows, now. It seems likely that the danger—whatever it was—that drove our forefathers from this planet in the long ago, must be gone now. But it may not be. Therefore, be careful."

"Nonsense!" Ron Estar blurted. "About the danger, I mean: that's nonsense."

"I hope so," Var Shawn answered without smiling.

"There's no doubt about it," Ron Estar persisted. He slapped the strangely shaped little weapon holstered at his belt. "Our forefathers didn't have *this*. If they had had it, nothing would have been strong enough to drive them from their home."

"We do not know exactly what our forefathers had or did not have," Var Shawn objected. "We know little or nothing about them, except that they were a great people."

"I doubt that too," Ron Estar said. His face was brown, but there was a thin haughtiness about it, and something of a fierce pride. "They ran away from their homes, or a few of them did. They didn't stay and fight. They were weaklings, cowards, who could find safety only in flight."

Bal Norman stirred restlessly at the words. He had scarcely heard what his two comrades were saying. He was looking, his perturbed gaze running over those vast mounds. He had seen them from the sky, coming in, but now he saw them at first hand. The little ship had been brought down on top of one of them. They were everywhere, hundreds, thousands— Grass was growing over them, and trees, and weeds, a lush, luxuriant vegetation.

Once this had been a city, a tremendous city, a city of sky-high towers and long, broad avenues, of circling ramps and landing fields. They had seen it from the sky. It had stretched for over a hundred miles along the short of the sea that lay to the east. A city a hundred miles along the shore of the sea that Bal Norman stirred.

"It is unfair," he protested, "to call our forebears cowards because they ran away, *until we know what they fled from.* Perhaps the menace they faced was overwhelming and they had no choice except to flee."

Ron Estar's eyes flicked at him in startled perplexity. "It is true," he admitted, "that we don't know what conquered them, what sent them fleeing in panic, but they escaped into space, and the danger did not follow them. Therefore it could not have been very great. Perhaps it was too great for them to face, but they were only a primitive people, with but a slight knowledge of me-

"Stay away—and that's an order," he shouted.

chanics and almost no knowledge of physics."

"They had the Barford Drive," Bal Norman corrected. "That was no little thing. After four thousand years, we have only refined it to the point where we no longer need a launching cradle for our ships, and otherwise we have improved it not at all."

Ron Estar hesitated, started to speak, then looked away. "Yes, they had the Barford Drive, but apparently they were scared to use it. At any rate, they didn't use it very much. Only two ships escaped. Judging from the size of this city, it must have contained twenty millions of inhabitants at least, but out of those millions only a handful escaped—"

"Seventy-eight," Var Shawn inter-

posed. "We are their descendants."

"I know," Ron Estar said. "But—"

"We were sent here to investigate that 'but,'" Var Shawn continued. "Two 'buts'! *But* what happened to the other inhabitants of our old planet home? *But* why did the seventy-eight flee. For four thousands years those questions have been asked and remained—questions. We were too busy, conquering a new planet, populating it. And our old home was light-years away—no little flight even for the Barford Drive."

"And before we land we know the answer to one of those questions," Bal Norman said, his voice oddly taut with a strange uneasiness. "We know that the millions who once lived here are here no longer. We found mounds, mounds that once were cities, but none of the companions of our forefathers are still alive."

His voice trailed into the silence. As soon as he had stepped out of the ship, he had heard the silence. This whole planet was silent. The wind, moving up from the seashore, barely rustled the leaves of the trees. Somewhere a tiny insect buzzed. No bird cried; there were no birds in the air. No animal called; there were no animals. There was only the dim, indistinct, almost unheard hum of some tiny insect and the faint rustle of a haunted wind. The three watched the silence uneasily for a moment, their eyes searching among the mounds, searching but finding nothing.

Var Shawn spoke: "You go to the left, Ron, toward the river that we saw. Bal, you go to the right. I will go straight ahead. I think there is no danger here; otherwise I would not split us up. Use your radio packs if you find anything important."

THE MOUNDS were everywhere, Bal Norman found. They had a tendency to form squares, with troughlike depressions crossing each other at right angles between them. Those troughlike depressions had once been streets, four—he mentally estimated the meaning of the term—four thousand years ago. People had walked through these streets then, his own kind. They had taken clay and pressed it into a rectangular shape and baked it into bricks. With the bricks they had built houses along these streets, building themselves a city, a home, a place to live, to work, and play. They had passed down these streets, a colorful throng, going in and out of these mounds that had once been houses. Now the clay of the bricks was turned into mud, the stone was pitted and weather-beaten, eroded by the rains of four thousand springs, and the metal had flaked into rust. Good honest metal, stout steel, tough to endure the strains and the stresses imposed upon it, it had not endured the rain and the snow. Rust now, a brownish stain upon the stones.

Four thousand years. While the sons and daughters of the seventy-eight had fought for a foothold on a hostile planet, fought and lost, fought and won, forgetting in the stress of living much of the old knowledge that had brought them to safety across the light-years, finding it again little by little as freedom from the fight for existence gave leisure for research, while the sons and daughters of the seventy-eight had become a new race, toughened sufficiently until even so critical a judge as Ron Estar could be proud of them, *this* had happened here.

They had not known it was hap-

pening. The seventy-eight had been extremely reluctant to talk of what had happened back there across the light-years. They had told their descendants almost nothing. Vague hints and dim fears had been their legacy. The seventy-eight had been too busy just trying to stay alive to leave histories for their descendants. Now their descendants sought the answer for themselves, for that answer was important. The danger that had destroyed a thronging race, a race that numbered millions, forcing a few of them to seek safety across space, not even daring to stop in the planets of their own solar system, might come across space too. It had not, but—

What had happened here? War? Had space ships rained death upon this city? It was hard to know. Four thousand years would wash away the wounds of war. But probably space ships had not been used against this city. Airplanes, possibly, but not space ships, for the ancients had apparently possessed only two space ships, and those two untested, not understood. True, they had been equipped with the Barford Drive, but apparently even the seventy-eight had known little about the operation of the Drive. The two space ships had needed long, clumsy cradles for launching. The grandsons of the seventy-eight had eventually learned how to launch their ships without cradles—their one big improvement of the Drive.

No, not war. What, then? Pestilence? Famine? Had the natural resources of this planet failed, had the food supply given out?

No. Plants grew luxuriantly in this soil, and they had seen unending miles of forests, trees covering whole continents. Plant life meant food. Therefore famine had not driven this people from their home. It shocked Bal Norman to realize there was nothing here now to consume the superabundant food. No herbivorous creatures, to live on the grass, no beasts of prey, to live on the grass eaters. No birds, to eat the fruits and the microscopic insects. No fish in the sea. Nothing but insects, and not many of them, and not very big ones. Now and then insects resembling gnats seemed to rise in a thin cloud about Bal Norman's face, disappearing at the wave of his hand. He was never certain that he saw them. They only seemed to be there.

What menace had stalked through these streets four thousand years ago? Where had it come from? Had the people who had created this semicivilization synthesized some monster that had destroyed them? What had happened here to this race groping toward greatness?

"Nothing yet," Var Shawn's voice came over the radio beam. "I don't understand this, I don't understand it at all." Var Shawn sounded worried.

"I'm over near the river, in what must have been a manufacturing district," Ron Estar whispered over the radio. "Some of their factories are standing yet. They built soundly." Ron Estar sounded perturbed, as if he could not understand how the engineers of a race so weak it allowed itself to be blotted out, could ever have erected a sound structure.

"I have found nothing," Bal Norman said. "Mounds and weeds and trees, and a few insects."

He could not see either Var Shawn or Ron Estar. They were over to his left, hidden from sight by the intervening mounds.

Then he saw the statue.

It was down at the bottom of a ravine that had once been a street.

It had been buried in the red soil, but some recent rain had washed the concealing dirt away. Carved out of stone that the weather had blotched into a strange purple color, it lay there in the ravine.

Bal Norman slid down to it. He did not touch it, did not bend over it. He looked. It represented the nude body of a man, perhaps a wrestler, certainly an athlete. Each corded muscle of the body had been faithfully carved in stone, the curve of the thigh, the narrow, hard lines of the hips. Discolored now, time-worn so that even the stone was beginning to wear away under the slow attrition of the elements, it was still so near perfect that Bal Norman gasped in admiration. Even the face of the statue showed emotion, the twist of the head on the neck, the muscles thickening in the throat, the half-open mouth, as though the artist sought to represent his athlete as crying out in fear. Bal Norman looked. He was not aware that he had suddenly stopped breathing, that his lungs had snatched at his breath, refusing to release it as something suddenly grown very precious. But he did know that little by little terror was coming into his mind.

This—he gasped for breath—this was no statue! This was—

"Var Shawn!" His voice was a sharp whisper of sound, tense with fright. "Var—" He caught himself. No need to call Var Shawn yet. Make certain first. He forced the terror out of his mind, forced his lungs to release the breath they clutched so desperately. But, as he drew the little weapon holstered at his hip, his hands were shaking, and the terror was beginning to creep again into his mind.

He adjusted the weapon, setting the flame to a thin needle point. This would tell. This would reveal whether this statue was a statue, or something else. Something that might explain why these mounds were here, why this race had died, why the seventy-eight had fled, risking the unknown dangers of space to the certain danger that had swept across this planet four thousand years in the past.

He tested the weapon. The flame leaped out, a thin blue radiance so hot it seemed to singe the air. Where it touched the ground, the red clay smoked and tried to burst into flame. Where it touched the grass, the grass exploded with tiny popping sounds as the moisture in it was converted instantly into steam.

He turned it off. It was properly adjusted. He brought the muzzle down to the statue, lined it up. The blue radiance lanced out. It cut cleanly, cleaner than a cutting torch —and faster.

It cut the statue cleanly in two so the two halves fell apart. Tiny beads of sweat suddenly popped out on Bal Norman's forehead. Then the muscles writhed like ropes in his cheek and he leaped to his feet.

"Var Shawn!" he shouted. "Var Shawn. Ron Estar. Come here quickly."

There was no answer.

"*Var Shawn!*" His voice was almost a shriek, screaming into the radio microphone that hung on a small locket around his neck. "Var Shawn—I think—I'm not sure but I *think* I've discovered what we want to know. The inhabitants of this planet—*Var Shawn!*"

Var Shawn did not answer. There was no answer from anywhere. There was only silence, a haunted silence broken by the thin distant buzzing of microscopic insects.

Bal Norman ran to the top of the nearest mound. His eyes raced

around the horizon. He saw nothing. In all that mass of rounded mounds nothing moved. He started to call again. The words were choked off in his throat as Var Shawn answered.

"Help," Var Shawn said, over the radio. "Help."

His voice was indistinct, thick.

"What's the matter?" Bal Norman shouted. "What's happened? Where are you?"

"Over here. It's got me. Help—" the sluggish voice said. Then it grew sharp. "No. Don't help me."

Bal Norman was already racing forward. He had caught a glimpse of his leader at the edge of a ravine not over a quarter of a mile away. Var Shawn was staggering in circles.

Norman covered the distance in minutes. He was in excellent physical condition. He reached the ravine where he had seen his comrade.

Var Shawn was not there. He was not on top of the adjoining mound. He was not among the trees. He had not fallen and been hidden by the grass. He was not in the ravine. Norman looked. There was an uncovered statue at the bottom of the ravine. Var Shawn's tracks were around it, but he was not there. Bal Norman wasted no time looking. He raced back to the top of the mound, calling sharply.

He saw Var Shawn. His leader was slipping stealthily down the ravine. He was hiding, trying to keep out of sight. He was lurching, staggering, his gait mechanical and stiff. He was going in the wrong direction.

"Var Shawn, wait! I'll be with you in a minute. Stop where you are. The ship is not in that direction. It's the other way. You're turned around and you're heading in the wrong direction."

"I know it," Var Shawn answered.

But Bal Norman was racing to-

ward him. Norman thought he had heard incorrectly. Words pounded in his phones as he raced toward Var Shawn, words that didn't make sense.

"Stay away from me," Var Shawn was saying. "Stay away from me."

Bal Norman stopped abruptly, twenty feet from his leader. He stared in stupefied perplexity at Var Shawn. Var Shawn, his feet planted wide apart for steadiness, was leaning against a tree. His face, contorted, grimaced, was blotched with purple. But it was not the purple that held Bal Norman's gaze. It was the weapon in his leader's hand. Var Shawn was pointing it straight at him.

"I'll shoot you if you come any closer," Var Shawn was saying. "Oh, I won't kill you—I've got the gun set to throw a stunning discharge. You stay away from me, Bal. Stay away from me."

Bal Norman could think on his feet. His race had had to learn how, during the last four thousand years. Or perhaps they had never forgotten. He was thinking now, thinking faster than he had ever thought before.

"What . . . what happened, Var?" he questioned.

"*It* happened!" Var Shawn grunted grimly. "Bal, you've got to stay away from me. You've got to carry the news back home. You understand? Back home—"

"Look!" Bal shouted, throwing up his hand and pointing to the right.

Var Shawn looked. The urgency in his companion's voice was so great he had to look. Bal Norman leaped.

He wasn't sure what had happened to Var. He thought he knew, but he wasn't sure. But he did know the heroic qualities of his leader, qualities bred into the race during four thousand years of struggle. Var had to be knocked out. He had to be slugged, dragged back to the ship. Even if it couldn't be fixed, Var couldn't be left here in this wilderness of mounds to die. So Bal Norman leaped.

Var Shawn seemed to sense what was happening, that he had been tricked. He swerved to one side, but he didn't leap. It seemed he couldn't leap; he fell. Falling, he brought up his gun. A ball of flame leaped out.

"Damn you, Var," Bal Norman screamed. "I'm trying to help—"

The flashing electrical discharge knocked him sideways. Balls of fire flared before his eyes. His legs went out from under him. He was unconscious before he hit the ground.

HE wasn't out long, ten or fifteen minutes perhaps. He struggled to his feet.

"Var!" he shouted. The shout died in a groan. Var was gone.

A piece of paper lay at the foot of the tree where Var had stood. Bal grabbed it, started to read the message, hurriedly dropped it. The words written on it were down when it hit the ground. Bal found a stick, cautiously turned it over.

"*Don't touch this piece of paper,*" Var had written. The phrase was shakily underlined. "Sorry to have knocked you out, Bal, but you would have insisted on helping me if I hadn't. And that might have been fatal. Bal, I've discovered what happened here four thousand years ago. It was—" The writing grew shakier. It was a hurried scrawl now, almost unreadable. "It's getting me. No time to explain. You can figure it out. You can't miss. Just look at one of those statues. Get Ron. Get the ship. Warn the folks back home not to send another expedition—"

"Don't try to follow me," the message ended. *"This is an order."*

Bal Norman never clearly remembered what happened after that. He knew he started to look for Var, and knew he had to force himself to stop. Var was—all right. Var was better than all right. Var belonged to that heroic breed that had fought for life for four thousand years, that four thousand years before had fought and lost and fled to fight again.

Var had said. "Get Ron. Get the ship. Warn—"

Bal Norman staggered as he ran. His sides began to hurt. His legs seemed to be turning to lead. He ran on. He called into the microphone. But Ron Estar did not answer.

Had— His mind refused to accept the thought. He would not believe it had happened to Ron. He kept calling; Ron didn't answer.

Ron had gone to the left, toward the river. There had been manufacturing plants along the river, four thousand years ago, plants that had been erected by a race that Ron regarded as weaklings, because they had fled, because they had not been strong enough to conquer. He had discovered that some of the structures erected by the engineers of that vanished race had been stout enough to last through forty centuries. It seemed to annoy him.

Bal Norman almost stumbled against Ron before he saw him. Ron was standing on top of a mound a little back from the river. He was staring down below him, staring fixedly at the crumbling remnant of what lay along the edge of the water. At a glance Bal Norman saw what it was—a launching cradle. A crude one, almost a mile long, but still a cradle. It was from such a cradle as this that the first space ships had been launched into the air. Possibly the two ships that had taken the seventy-eight away from this world had been launched here, had here been hurled upward into the air to such a height that they could use their untested Barford Drive. Once in the air the Drive would carry them, but if it were used to lift a heavy ship from the ground, the space warp that was the soul of the Drive would distort the surface of the planet, and setting up incredible vibrations in the fabric of space itself, blow the ship to nothingness and a chunk of the planet with it. The Drive worked that way; hence launching cradles. In landing, the ships could be brought down with the Drive almost off. It blasted merry hell out of the surface on which the ship was landing, even if it was cut almost to nothing, but the ships could be dropped the last foot or two. That didn't do them any good, but they could stand it. Once in the air, they had to stand it. Such a landing ranked as a major operation. Of course all that belonged to four thousand years ago, to the first two ships. The ships built now could take off from anywhere.

Ron Estar was staring at that launching cradle. There was awe on his face, and a new respect.

"Ron!" Bal Norman shouted.

Ron was startled by the voice. He looked around, and seeing it was only Bal, smiled. There was awe even in the smile. He waved his hand toward the launching cradle.

"Bal, I've made the most stupendous discovery—"

Bal scarcely heard the words. He wasn't listening. He was fighting for his breath. "Why didn't you answer?" he blurted out.

"Did you call?" Ron queried, puzzled. "I guess I was so interested in what happened here at this

launching cradle four thousand years ago that I didn't notice your call. I tell you, it was something—what those men did."

"Shut up!" Bal Norman snapped. "Ron," he panted. "Ron, I . . . we've discovered what happened here. I mean—the menace—the danger—the thing that drove our forefathers from this planet, we've discovered what it was."

RON ESTAR'S brown face showed a little surprise. But not much. And there was no surprise at all in his voice. He spoke.

"You have? Good! That was fast thinking. I thought you'd get it, of course. I found out what it was almost as soon as I left our ship, and I was going to call it to your and Var's attention but I ran into this cradle and got sidetracked."

"Then—you know what it was?"

"Sure. There are too many of these statues lying around to miss it. The first one I saw gave me a clue to what had happened. And bad it must have been, too. I don't blame our forefathers for running, especially since they probably knew no way to fight it. I'd run too, and damned fast, if I met the death they faced. I wonder how it got started? Did one of their experiments run wild? Or did the thing evolve here? What do you think, Bal, about how it got started?"

"I don't think," Bal Norman husked. "*Ron, it's here yet.* It hasn't died out. It's still here, the same death that destroyed all life on this planet. *It's still here!*"

The words didn't seem to register on Ron. He stared at his companion. "What are you talking about?" he demanded. "It can't be here. It couldn't last four thousand years."

"It is here. It got Var. I've been trying to tell you. It got Var." Panting still, fighting for his breath, he explained what had happened. "It first appears as a purple patch on the skin. Var's face was turning purple. It got him. He—" Bal Norman choked.

"Where is he?" Ron Estar almost shouted. "We've got to find him, take him away with us, help him."

"We can't find him. He ran away, to save us. He hid. He knocked me out and crawled off to die alone, to save us."

Sudden pain showed in Ron Estar's eyes. "Lord," he whispered. "Lord—"

Then they were running toward the ship, running as fast as they could, over the mounds, across the ravines. Here and there in the ravines were statues. These they avoided. They ran, knowing they raced against death. Under a silent sky, across a silent earth, through a world whose silence was broken only by the faint buzz of distant insects. Their feet pounded heavily. Midges like microscopic gnats stirred up in clouds around them.

They reached the ship. The photoelectric cell that actuated the automatic lock recognized them, and the heavy port swung open. They flung themselves into the ship, into safety. A ship similar to this had carried their forefathers to safety. Now this ship must carry them.

"Lift her up!" Ron Estar gasped. "You handle the controls while I cut a tape and put it on the automatic radio transmitter for the folks . . . for the folks back home, so they'll know."

EVEN THEN Bal Norman wondered what good the radio would do. It would not reach back to the planet

that his race now called home. Too far. But he did not question the order. He leaped to the controls. Under his fingers the atomics hummed violently. The ship shuddered as the Barford Drive took hold, the Drive that had once been the sole hope of new life for a race that then had called this planet home. The ship lifted, the Drive snarling defiance.

In the radio room, through the open door, Bal Norman could hear Ron Estar. Ron was putting the whole story on a tape that would go into the automatic transmitter. Bal was calmer now. He forced himself not to think of Var. He kept his mind away from the death that had lurked here on this planet. He forced himself to begin computing the course for home. That way, he wouldn't have to think.

From the radio room, he could hear Ron's voice.

"We found statues here, hundreds of stone statues. They were stone all right, but they weren't statues. They were all that was left of the race that had once inhabited this planet, your race, my race. The disease, if it was a disease, turned flesh into stone, or into bone that was almost as hard as stone, accelerating the normal process in the human body by which calcium is made into bones. Here the process ran wild. What started it, I don't know, probably will never know. Perhaps the experiment of some scientist ran away from him. The process, once started in an individual, seems to have continued with remarkable rapidity, running its full course in less than an hour, possibly in minutes after the first purple patch appeared. The agony still stamped on the faces of some of the statues seems to indicate it was very rapid. And there seems to have been no cure, no way of stopping the spread of this vicious molecule. Perhaps it was wind-borne, perhaps it also got into the water supply. Perhaps it eventually contaminated all the water on the planet, all the soil. It destroyed all life, everything except a few insects, microscopic midges. Incidentally those midges could be the spores of the disease itself, though this seems improbable. But whatever the source of the disease is, it is still here. Stay away from this planet. Stay away from it forever. The death that the seventy-eight escaped is still here—"

Ron's voice faltered. It stopped. There was a moment of silence in the radio room. Bal listened. He heard Ron's voice start up again. It was changed now, different.

Bal remembered the statue he had cut in two. The two halves had revealed the internal organs of a human body, organs that had been turned into stony bone. He had known then, what had happened, here on this planet where his race had been born. Probably, when the man had died, he had been wearing clothes. But the clothes had rotted away, leaving the almost imperishable stony bone.

Ron's voice ran on. It was different now, subtly changed. Bal was not listening. He finished computing the course. He moved to the control board, to set up the course on the automatic gyro that would steer the ship back home. There was a small mirror on the control panel. Bal found his own face reflected in it. He looked at his reflection, and looked again, and blinked. Time seemed to stop for a while. He stood without moving. He forced himself to think, forced himself to compute a new course, to shift the controls so the ship would follow the new course. Then he

turned toward the radio room. Ron was coming out. He had finished cutting his tape. He stopped in the door, and leaned against it, steadying himself against the swerve of the ship as it took up its new course.

Bal looked at him.

"Ron," Bal said, forcing his voice to be steady. "Ron. There's a purple patch on your forehead. Ron, you've got it, too."

Ron Estar stood there in the door of the control room. He leaned against the edge of the door, to steady himself.

"I know it," he answered. "That's why I was in such a hurry to cut this tape for the radio, so the folks back home would be warned when they send out an expedition to look for us. I know I've got it. And so have you. There's a purple blotch on your cheek as big as a man's fist. And it's growing."

Bal Norman tried to grin. He pointed toward the tiny mirror on the control panel. "I saw it start, in there," he answered. "And I knew you had it too, knew that was why you were cutting the tape. That's why I set the course I did —not for home, but for an orbit around this planet. It would never do to send this ship back home, with our bodies in it. The folks would find it. They would investigate, and die, and the scourge would be loose there, too. So I set us up on an orbit around this planet. This ship has power enough to circle this world for centuries. Now, when they come looking for us—and they will come —they will hear the radio signal, and be warned—"

Ron Estar nodded. "Good boy," he said. "You're fit to belong to the bulldog breed that built that launching cradle back there." He pointed to the world below them. "When I saw that cradle I knew I had been wrong about our ancestors. They weren't cowards. They weren't weaklings. Not even the ones who stayed here. Especially those. Why? Because it took thousands of men to launch a ship from that cradle. Thousands of them. Thousands stayed there on earth, knowing they would die, so that seventy-eight might have a chance to live. I saw their bodies, under and around that cradle, the engineers who made it work, still at the controls. Death must have got them soon after they sent the second ship out. But they sent it out . . . they sent it out—"

Ron Estar choked. He swayed and caught at the door. His stiffening fingers lost their hold. He fell with a crash.

Bal Norman saw him fall. He tried to lean forward to pick him up. His knees buckled under him. He lost his balance, and fell.

The last thing he saw was Ron Estar's face. There was pride on that face. There had been pride on it when they landed here, but now it was a new pride. It was not only the pride that comes from belonging to a race that has fought itself upward to greatness in four thousand years, it was the pride that comes from belonging to a race that has always been great.

Silence came, a silence as deep as the silence that cloaked the world they were circling. In that silence there was only one sound—the Barford Drive growling defiance at the world below the ship. Four thousand years ago it had first growled defiance at that world. It growled still.

THE END.

THE PURPLE LIGHT

By E. Waldo Hunter

Sometimes it pays to crawl right into the heart of trouble—

Illustrated by R. Isip

I WAS TAKING *No. 14* back to the base when it happened. The figures painted on her scarred molyb hull didn't mean we had fourteen ships. It was one of the four cans—and I means cans—that comprised our charter service. In the six years we had been operating, we had bought and rebuilt seventeen wrecks, and had seen the end of thirteen of them. One more just at this time would finish us. We couldn't stay in business with less than four spaceships; what with the sudden influx of mining machinery into the asteroid belt and the competition of two more

freight lines in our territory. And here I was about to wash the old *Kelli NX*.

The purple light had flashed on. There were half a dozen signals of the sort on the little one-man cargo carrier—warnings for lowering air pressure, fuel shortage, synth-grav system troubles—I always thought that was a funny one. You'd fly up off the deck plates and smack your sconce on the overhead, and when you came to, the silly signal light was on to tell you something was wrong with the synth-grav!—even humidity changes and fuel shortage. But the big purple light on the forward bulkhead was something different again.

It was a very bright and a very pretty shade of purple and it said, in effect, "Somewhere around here is an atomic power plant whose U-235 is just at the ticklish point where the disintegration will be too fast for its ordinary energy output. There is about to be an explosion that will make a light bright enough to read a postage stamp by from here to the moons of Mars; and if there is anyone around here just now he'd be foolish to loiter."

Out here in space, you know, it wouldn't make any noise. I wasn't afraid of being startled. Nor was it the kind of an explosion that would butter me over the bulkheads, the way they put it on toast in cafeterias—with a brush. Because there wouldn't be any bulkheads. Or any me. There would be a lot of light and heat and a squib in a trade journal about Rix Randolph, expressman, and how he had been a little careless with his '235.

Now it was perfectly evident what I had to do. Also that I had to do it fast. Cut off my power, stop the uranium action. Just possibly the disintegration would slow a trifle, enough to lower the output below the danger point. And if that didn't work—bail out. Slip into the ancient but reliable spacesuit strapped to the bulkhead there and get away in one sweet hell of a hurry. I don't know why I thought there was any choice in the matter. The suit was fueled and provisioned for twice the distance from here to either Terra or Port of Eros.

I HOPPED to the control panel, threw over the three levers that controlled the neutron-streams and their generator. The whisper of escaping steam faded out of the water jackets, and my stomach lurched as acceleration cut out. I looked up at the purple light again. It was still on.

Too late!

I ran to the bulkhead, opened the chest plates of the spacesuit, climbed in, got the arms controls working and flipped the switch that lowered the helmet, closed the plates, and cut down the artificial gravity of the floor plates. It seemed to take an eternity to operate, though it could only have been a couple of seconds; and in that couple of seconds I did a lot of thinking.

That purple light, for instance. There were some bright boys in the ship-designing business, and they had even these old cans nicely enough equipped. The warning device was a result of the labors of that Edison of the spaceways, old Dr. Fonck. He'd invented the attachment to a U-235 plant that emanated a static quench-field to act as a governor to the neutron-streams that activated the uranium. It made the neutron-streams that much more inefficient, but who cared about that with all that power to throw around? The important thing was that it blanketed the disintegration to some extent. If the thing was going to

blow up with the fury that only an atomic explosion or a supernova can show, it would at least start to blow up slowly. That is, when the reaction started to accelerate beyond control, the quench-field got in the way of the countless millions of neutrons, tending to add a positron to them, and convert them into useless, harmless hydrogen nuclei. It meant a slowing down of the whole process, until the neutrons came too fast. Then—lights out.

But at the same time it gave the poor sucker in the ship, or wherever else the plant was, a few minutes grace in which to get away from there. It also gave that purple light a chance to tell him about it. Not much of a warning, of course. Once that kind of a reaction starts, it can't be stopped. The signal was rather like tying a guy to a chair and then telling him, "See that dark character over there? He has a gun aimed at your head and is about to pull the trigger." You were grateful for the warning; at least, you'd know about it before you were shot. Maybe even some miracle would happen to untie you. But in the case of the atomic explosion it would have to be a miracle in speed.

I thought of something else as I released the suit with me inside it from the bulkhead straps. It was the ship, the business—all it meant to me. I was partners in it with my brother, and it had been killing work. Years of it, borrowing for a measly new piece of equipment; twenty-hour stretches with welding arcs and pressure testers, trying to make our old tow-ins spaceworthy; cutting out competition by going profitless, working for nothing and half-starving besides, just to keep the little service extant. With my hand on the air-lock door I paused. This was the finish of the business. I knew that. It wouldn't finish the way I would if I stayed here another two minutes. Not fast and clean like that. There would be desperate councils of war with my brother. Bankruptcy proceedings. Sheriff's sales. Months of litigation. No job in the meantime. Relief. I'd never taken something for nothing in my life.

I slumped against the door and flipped open my face plate.

THE NEUTRON-FIELD wasn't confined to the power compartment. It was a spherical field about the ship, not directly attached to the power plant. Didn't have to be. As long as it was as close as possible to the plant, as long as it was most concentrated near the neutron-streams, it had its delaying effect on the in-

evitable explosion. I watched the forward bulkhead glumly, and the light over it. It would come roaring up from there. I wondered vaguely if I would be able to see it coming. Bail out, chowderhead, I told myself desperately. The business is gone; why do you have to go, too? But I didn't move. What's the use of saving a skin if the very guts are gone out of it? I couldn't go on any more, I knew I shouldn't run out on my brother this way, but—What would he do in my place? What would anyone do? Fonck himself couldn't stop it now. No atomic plant can generate a quench-field powerful enough to stop its own explosion. My face was clammy. I decided I didn't want to see it coming, and walked over to the forward bulkhead.

When I did so the purple light dimmed. I stared at it, shook my head. Maybe my eyes—no. It remained dim, but it wasn't getting any dimmer. The other lights looked all right. I walked back to the after companionway, looked along it. Those lights were O. K., too. Now what— Oh! Oh! Now the purple light was brilliant! Any second now. I stumped over to the forward bulkhead again. I'd meet it halfway—damn the miserable, stupid business and the balky relic of a ship anyway! They'd finish Rix Randolph but they'd find him on his feet! I knew what it felt like now to die with a grand gesture.

I stood with my legs apart, eyes closed, fists clenched, directly under the purple light. I wish that little French girl in Port of Eros could see me now, I thought. "All right," I said steadily. "I'm—ready."

Nothing happened for about ten seconds. About that time I discovered I'd been holding my breath. I let it out with a whistle. Still nothing happened. All of a sudden I felt like a melodramatic damn fool. Which I was. I opened my eyes. The purple light was dim, almost out.

"I got to get out of here!" I screamed, and headed for the air lock, slid the door open. As I whirled to close it, I saw the light gleam out brightly again. I stopped dead, fighting with myself, fighting fear with curiosity.

Every time I got near the forward bulkhead the light grew dim. Every time I drew away from it it got brighter. Now—why?

I went, like a fear-frozen sleepwalker, over to the light. It dimmed. "No!" I breathed. "Don't tell me—Bodily aura? Hell, that's ghost-story stuff! But—" It certainly looked like it, though. Well—why not? A man was a hunk of matter; matter was a mess of electric charges, positive, negative, neutral. Was I, by some crazy chance, made up of precisely the right combination of electric charges to increase the quench-field around the U-235 up there? Aw, it was crazy! But—The light did dim when I approached the power plant. The indicator was extraordinarily sensitive—had to be, to record the atomic acceleration in there fast enough to do any good. Maybe then if I got close to it—crawled in next to the plant, it would swing the scales!

With a sob I tore open the repair doors in front of the water jacket, squeezed myself in, hugging the plates. It was hotter than the furnace in Hell's cellar in there, even with an insulated spacesuit on. But what did I care about that? I was going to die anyway. I might as well die doing something about it.

But I'd already done it. The purple glow faded and died, and I knew I was safe. I kissed the hot

plates, and I'll have scarred lips for the rest of my life because of it. I broke down and cried like a baby.

It must have been an hour later when I crawled out and pulled myself together. As I climbed out of the suit and strapped it up and turned on the grav again, I thought deliriously of being alive again. Yes, and not only that—rich! Any way you look at it—suppose I was, as I had guessed, possessed of a neutral electric charge? Why, the biggest passenger lines in the System would bid against each other for me! And more—if I handled it right, I could grab me the Space Prize for the most important contribution to space commerce when this five-year period was up—five hundred thousand bucks, no less, on the very strong chance that my adventure had some hint in it that the lab boys could develop into something salable. No more worries! No more debts!

And that's how I came in to Eros, laughing like a loon and calling up every newspaper and laboratory in the place. They sent their scientists to look over the old can, and they wined me and dined me and after they found what they found in the ship they very nearly laughed me out of the System. Why?

Well, it's this way. The purple light signal was all right. The quench-field was all right. And there *had* been an inminent atomic explosion in the ship. But not in the ship's power plant. I shouldn't have thought of bailing out. I shouldn't, being a mere space pilot, have tried to think I was an atomic physicist. And— I shouldn't have opened my face about it. Because that atomic explosion was building up in the power plant of my *spacesuit*. And I killed it by crawling into the heart of the ship's big and potent quench-field.

THE END.

IN TIMES TO COME

BOB HEINLEIN has sent in the completed story mentioned last month in connection with the Heinlein History of the future—"While The Evil Days Come Not." The title has, as was suggested, been changed—it will be "Methuselah's Children." But the story has not—and it is a *story*.

There's something Heinlein left off of the abbreviated chart he sent in—some life-lines he didn't show. Lazarus Long, for instance, one of the Families, one of the group that make up Methuselah's Children. Long was born in 1912. He visited Pinero, the man who could predict length of life that Heinlein discussed in "Life-Line," and made Pinero distrust his machine. That was 1942. He was on Venus when Sam Huston Jones and Wingate were discovering personally the "Logic of Empire" in 2010. During the period of the religious dictatorship in the United States—2020 to 2070, the time of "If This Goes On—"—he was on Venus. About 2125, Lazarus Long returned to Earth, and rejoined the Families, Methuselah's Children, in the time of the Evil Days, when all mankind was in ferment because the secret that the Families had kept for more than two long centuries was out. They alone among mankind could, and normally did, live at least one hundred eighty years, usually two hundred or more. For them, fourscore and ten meant the period of juvenile training; *ten*score and ten was nearer being a lifetime.

No wonder poor Pinero had distrusted his life-line predictor when he attempted to read Lazarus Long's future! There was other and even better reason though. What happens to a man's life-line and his time-extension when, fleeing from a world gone mad for the secret of practical immortality, he embarks on an interstellar cruise at a speed near light's?

And how could they convince the world that the secret of Methuselah's Children's long lives was forever unattainable to any others; that that secret was one that could help no living man, however much he hungered for life.

The fact that those long-lived people existed, there among them, immortal among the mortals, conducting their affairs with the health and vigor of youth—and the experience of one hundred fifty years of life!—made a world go mad for immortality.

"Methuselah's Children" is the record of that time. You'll find surprises in it—characters you've met before popping up in a totally new light as hidden members of that band of people known as the Families. They were active down the years of that Heinlein History, you know—

THE EDITOR.

BRASS TACKS

The 1941 model of the annual science-fiction convention.

Dear Science-Fiction Fans:

As most of you know, the World's Science-Fiction Convention is going to be held in Denver, Colorado, July 4th, 5th, and 6th, sponsored by the Colorado Fantasy Society. The convention committee fervently hopes that all readers and fans of science-fiction will make this convention if possible. Following is last-minute information pertaining to this gala event of science and fantasy fiction.

It will be held at Denver's fashionable hotel, the Shirley-Savoy, in the Colorado and Centennial Rooms. The rates of this hotel are extremely reasonable, more reasonable, in fact, than any of the other larger hotels in town, including the YW and YMCA, and we'd appreciate it if all of you who come will room here, for if a hundred delegates put up at this hotel we will be able to get the hall free, consequently having more funds for elaborate preparations and entertainment.

All fans who write ahead will be met at the bus station or depot and driven to the hotel. If your arrival is unheralded, you may get in touch with us by calling CHerry 1067 (Roy Hunt). The opening session will begin promptly at 9 a. m., Friday the 4th. The program has not as yet been worked out in too fine a detail, but we are more or less certain of the following:

Friday morning, from 9 to 12, will be an informal gathering where old acquaintances are renewed, new ones made, and autographs exchanged. Here you will meet many of the editors, authors, and fans that you have seen in the various science and fantasy magazines, and above all, Denvention's honor guest, Robert Heinlein, popular Astounding and *Unknown* author. Authors E. E. Smith, Robert Heinlein, Willard E. Hawkins, D. B. Thompson, A. E. van Vogt, Ross Rocklynne, A. G. Birch, Ralph Milne Farley, R. R. Winterbotham, S. D. Gottesman, Charles Tanner, and many others are expected. Such famous fans as Ackerman, Tucker, Madle, Widner, Morojo, Freehafer, Reinsberg, Shroyer, Dikty, Gilbert, Korshak, Bronson, Wright, Fortier, Tullis, Yerke, Knight, and countless others from all parts of the continent will be present.

In the afternoon there will be speeches pertaining to various phases of fantasy by leading science-fictionists. That evening there will be the traditional costume party where everyone that can, dresses as some science-fictional character. Punch, beer, and wine will be free, and after the party the equally traditional auction will be held, Korshak presiding, where the delegates may buy the original cover and interior illustrations of your favorite fantasy artists, and numerous other collectors' items to grace your den and collection.

Saturday (5th) will be a meeting of the Colorado Fantasy Society limited to mem-

bers only. Incidentally, all of you fans and readers, whether you plan to attend or not, and who wish to further the cause of science and fantasy fiction, should send us your fifty cents membership fee, for which you will receive a beautiful modernistic membership card, a number of booster stickers for your letters, and the official CFS publication, *The CFS Review*.

The afternoon will be an open business meeting of fandom discussing various problems paramount to fans, such as where the next convention will be held. The rest of the program is not yet decided on, although within the realm of possibility is a comical science-fiction play written and produced by the pro science-fiction author, Willard E. Hawkins, and a feature-length scientifiction movie; if possible, either H. Rider Haggard's "She" or Jules Verne's "The Mysterious Island." Sunday evening the Denvention will officially terminate with a banquet in honor of Robert Heinlein.

Anyone requiring further information should contact Lew Martin at 1258 Race Street, Denver. Memberships may also be sent to this address in either cash or money orders. No checks or stamps, please.

Let's all pull together and make this, the Denvention, *the* most successful convention ever, and one to be remembered far into the future.—The Denvention Committee, Olon F. Wiggins, Lew Martin, Roy Hunt.

So—there are Slans!

Dear Mr. Campbell:

Three Astoundings and two *Unknowns* came along together. They appeared like a tinkling fountain in an arid desert. I lapped them up. They're totally above criticism, and anyone who thinks differently should mooch around this burg awhile and see how much the mags look like home, sweet home.

Some years back, I met an Aberdonian named Malcolm Jameson. It's interesting, this, because it takes me along two trails. First, the Malcolm of your ilk is one of the naval gang of pen experts who, with some sly editorial encouragement, suggest that The Army Cannot Write—despite Captain S. P. Meek and several others. Waal, I don't aim to draw no shootin' irons in this hyah squabble, but I'd sure like to toss an outsize spanner into the cogs by saying that both the Army and the Navy are slipping, anyway. Me, I'm in the Air Force. L. J. Johnson, my collaborator in "Seeker of Tomorrow," and author of other yarns, is in the Air Force. The editor of one of your British contemporaries is now a Squadron Leader with the Fighter Command. One guy who practiced fantasy rather than preached it, and traversed time and space with an astounding compass, was "One Way Corrigan," an airman. The Army—pah! The Navy—pooh!

Jameson pops up again because he's on my list of confluctuating controuverences, otherwise inexplicable who dunnits. This way: I've met one Malcolm Jameson, but that's not all. I'll give you the story and you can give it to Sprague de Camp and he can go nuts trying to make fiction stranger than truth.

It started many years back. I was exploring an ancient part of Liverpool, and found some former slave dungeons in a place called the Goree Piazzas. I went home pondering the peculiarity of the name. Next morning I got my first letter from a Texas fan with whom I still correspond. He was B. K. Goree. Later, while strolling around Peel, I found a candy store run by one Carrie Cashin. Peel is in the Isle of Man. Carrie Cashin is Street & Smith's nicest lady detective. Ted Tinsley says she operates the Cash & Carry agency. When I got back to Liverpool I found in Lime Street a new swank gown shop called the Cash & Carry Salon.

Somebody's going to think I'm a hell of a liar, but this goes on and on. In Chester, last year, while in a café, I found myself sitting opposite a guy who was either the twin brother or else the astral body of Manly Wade Wellman. One month afterward, I got a letter from a reader of one of my British yarns. He bore the name of one of my characters, and was hopping mad because he said he didn't have white whiskers and didn't talk like I made him. Last week, I found two letters in local papers, one from Emily Slann, of Birkenhead, and one from Mrs. Slan, of Manchester. I dunno whether they've got tendrils. To top the lot, middle of last year I received a complimentary copy of an Australian fan magazine. The editor proved to be one Eric F. Russell, of Sydney!

All this has undermined my constitution, and I'm no longer fully responsible for my actions. I'm not seeking the Holy Grail, but what is just as bad is that I'm looking for a Shottle Bop. Hopeless, hah? Not in view of the foregoing! Besides, I've got far enough to find one shop where We Give Away Bottles With Stuff In Them.

There were a couple of dozen of the bottles on display. They were filled with dirt. One free to each regular customer. It turned out that what each regular customer was getting was "a small piece of Lybia."—Eric Frank Russell, 44 Orrell Road, Orrell, Liverpool 20, England.

"Nor ever will be" is going kinda strong. I have every intention of beating it, if I can!

Dear Mr. Campbell:

Here's my rating for the past year:

(1) "Final Blackout"—There never has been, nor will there be, a novel as great and powerful as this classic.

(2) "Slan"—Lived up to all expectations, but lacked the final punch of "Final Blackout."

(3) "If This Goes On"—Wow! Your fair-haired boy can certainly go to town on psychology in science-fiction.

(4) "Admiral's Inspection"—Jameson's hep, all right.

(5) "Farewell to the Master"—Mystifying suspense. Surprise of '40.

(6) "Vault of the Beast"—Ranks with "Farewell to the Master."

(7) "Quietus"—Miniature classic.

(8) "Coventry"—Heinlein's sequels are all great stuff.

(9) "Hindsight"—Williamson does do some pretty good ones, *n'est-ce pas?*

(10) "Crisis in Utopia"—Yeah, it was pretty fishy, wasn't it?

Comments:

THE LIEUTENANT

I see him yet, through that bold flag,
Whose gold doth fade on Tower Hill.
And right along the path beyond
Where mortals never tread,
His soul inspires many thoughts
In living and in dead.
For here it is that once again
He leads them through the battle;
Cheerful Frenchman, shaggy Scot,
Like some roaming cattle.
Mawkey here, and Weasel, too,
Pollard ever ready,
Coming at the slightest call
To cross a swirling eddy,
Which so many, long before,
Have forded in escape.

Ominous sentinel, he watches,
Waiting for the break of day,
When again he needs must ponder
On some better, surer way
To provide for those who worship
Him in silent, reverent prayer.

So we gaze on this great figure,
With our mixed emotions raw,
Some with wonder, few with hate,
All with one inspired awe.
For we know, as says the plaque
Beneath this flag on Tower Hill,
The words which graven there are true,
And ever through the land are hailed,
"When that great command remains,
No matter what, he has not failed."—
H. K. Pruyn, 22 Ft. Amherst Road, Glens Falls, N. Y.

The question on "Solution Unsatisfactory" is to answer the problem without supermen.

Dear Mr. Campbell:

Concerning my purely personal preferences of the April Astounding:

Best stories:

1 "The Stolen Dormouse"—Part I. De Camp is heartily recommended as an antidote for the blues.

2 "Microcosmic God." Sturgeon is rapidly becoming one of your best writers.

3 "Reason." Practice makes perfect. The more stories Asimov writes, the better they get. This is one of his best.

4 "The Scrambler." Somewhat along the same line as Van Vogt's monster stories, but refreshingly different—and just as good.

Though I could go on like this through the entire table of contents, I have to stop *somewhere*.

Naturally Rogers' cover, with its beautiful, not-too-garish tones, is the ultimate in perfection. His work on the interior, though good, shows that he can do better with color. Incidentally, what happened to your scheme of using color on the interior?

Interior art work is slowly improving, with best pics done by R. Isip, Rogers, and Binder.

Any slan, or reasonable facsimile thereof, could give you an accurate solution of the problem in "In Times To Come."—Billiam Kingston-Stoy, 140-92 Burden Crescent, Jamaica, New York.

This letter took five weeks to make the trip! Used to take about five days.

Dear Mr. Campbell:

At last this man Bond has produced something really worth reading. I'm refering to his novelette, "Magic City" in the February Astounding, much better than

any of his recent work for you, such as "The Day We Celebrate" and "Legacy." Maybe it's because he has more room to work on his characters in a novelette, or can it be that he is definitely trying to improve his style? I wonder. In any case, I liked "Magic City" very much. The plot is by no means new, but it was delightfully told in a way that seemed to make the fears and beliefs of Meg and Daiv very real and natural. "Sixth Column" continues on its powerful way; though the plot seems to run on lines somewhat similar to those of "If This Goes On—," but is not sufficiently like it to detract from the interest of either. This author can ladle out a bit of super-super very convincingly, and can put plenty of action into the tale. He doesn't let the plot lag by going into a lot of super-scientific detail, and he has enough science to stop the story from developing into a glorified double-action adventure novel; more power to his typer!

I daresay many of your readers will not like Schuyler Miller's "Trouble on Tantalus," as it's another tale of the same kind as his much-panned "Pleasure Trove," but I can eat up a story like those two every now and again. I'd never noticed that Miller was capable of such vivid description until I read "Trouble on Tantalus"; his description of the Black Hole really fired my imagination; that would've made a terrific Rogers cover. Miller impregnated the whole story with an alien atmosphere by the way he juggled words to describe the indescribable in a way that holds the reader; may I risk ridicule, and compare him, at his best, with Lovecraft?

Heinlein's short was more after the style of his original "Life-Line"—slightly wacky, but very reasonable and entertaining; however, I'm glad to see that he is giving us a novelette next month. L. Sprague de Camp's contribution to the month's wackiness was most acceptable, but I notice that Hedges did not do anything too serious in the past—return of that evergreen question, "What happens if you go back and kill your own grandmother?" Glad to see that Sturgeon has given the "Breather" a miss this time. I enjoyed his little tale, although it was one of those accident-on-spaceship type. "Castaway"—by far the worst story in the issue. The plot has begun to sprout whiskers by now. Not to be compared with R. M. Williams' previous tales for Astounding, such as "Robots Return" and "Flight of the Dawn Star." Not even as good as "Red Death of Mars," but that may be only because it was a short.

Stanley R. Short's article on the Klystron was very interesting. Sure, it was a bit technical, but that's the way I like 'em. Better than beating about the bush and only giving vague hints to what it is all about, as so often happens in many of the so-called science articles in some other stf mags. Thanks for getting us these top-liners to write about the things that they really do know something about. And that guy McCann is there again with his short-article-cum-filler!

To summarize, for the lab.:

1. "Magic City."
2. "Sixth Column."
3. "Trouble on Tantalus."
4. "—and He Built a Crooked House."
5. "The Best-laid Scheme."
6. "Completely Automatic."
7. "Castaway."

Rogers—adjectivally superlative! S'pose some of the grousers will say that his cover was unscientifictional, but they can't deny the fact that it was very beautifully painted. December '40 has been his worst cover in the last year. Isips on the interior were not so bad as they have been, but I prefer the style shown in the illustrations for "Testament of Akubii"—M. Isip—and "Habit"—R. Isip. Binder's O. K. at present. Schneeman is doing fine on "Sixth Column," but I would like to see him do some more in the machinery and spaceship line, e. g., "Red Death of Mars," and those unforgettable illustrations for "Flight of the Dawn Star" and "The Master Shall Not Die." By the way, what's happened to De Witt Miller? Cartier can now keep his lemon altogether, as he has now won it three times.

Nearly forgot your own editorial; keep it up! And may you find us many more Van Vogts and Heinleins.—Donald J. Doughty, 31 Bexwell Road, Downham Market, Norfolk, England.

A MATTER OF SPEED

By Harry Bates

The dictator wasn't invisible, and his secret police weren't. You just couldn't see them—which is a distinction with a difference, after all!

Illustrated by Schneeman

THIS was the moment. Russ tensed himself and pulled down the lever at his side. Sharp moonlight cut through the wall of blackness before his eyes. As the port door slid wide he settled himself firmly in the catapult, then clumsily, in the heavy gauntlet of his spacesuit, felt around for the release and pressed it hard.

Out of the port he shot, far from the starboard flank of the purring rocketship, barely out of reach of the mile-long streaking flame from her jets. For one brief moment he hung sickeningly in space, then gravity took him and he began to fall headfirst toward the dark monotone which was the Atlantic. The ship slipped away at a wide angle; then for a moment it was out of range of his eyes as he slowly turned over. When he saw it again it was far away, a tiny sliver of silver with a long tail of fire.

Far below, at slow, regular intervals, the great sprawling hook of Cape Cod swept past. He would alight in the Sound, a little below its southern coastline. Good! he thought. His calculations had been accurate.

Rapidly the hook explanded, until it was time to reach for the ring on his chest. There was a slight jerk as the glass tissue sprang back upward and bit into the thin air. After that the hook grew more slowly, until at the end the dark surface of the ocean seemed to leap upward to meet him.

He hit it hard and plunged beneath the surface, and when he shot back out fell face down and rode like a cork. At once he unfastened his 'chute—and then there was nothing to do until someone came. He floated uneasily, rising and falling in the ground swell, unable to twist over on his back, and unable to see the small speedboat which had turned with his fall and now was streaking silently toward where he lay. A moment later, however, he felt it nosing gently at his side, and then, twisting to the limit, he saw dimly above him the face of the girl he loved.

He clutched at the gunwale, and with a great effort and all the help she could give pulled himself up over the edge. Lying still in the bottom of the boat he let her unfasten his helmet, then with another effort wormed out of his suit. At once he had her in his arms.

"Oh, Russ, I'm so glad you made it!" she cried in a low voice, holding him close. "You recognized our old cypher?"

"Read it so fast I was stuttering," was his cheerful answer. "Is this a second childhood, Cathey—or what?" he asked, half teasing from old habit. "For a whole year I've kept my eyes on Earth, dreaming of

He bailed out into the soup and prayed. If his calculations were off, it meant a long swim—too long.

coming back to you and dad in triumph—and here you have me sneak away and drop down on you in the middle of the Atlantic like a spy. That's no way to ask a respectable young entomologist to behave."

"Ah don't, Russ!" Cathey cried with sudden emotion. "This may have saved your life."

FOR A MOMENT she could not go on, and there was only the fine vibration of the boat's powerful, muffled motor as it cut at an angle over the great swells in the direction of the coast. This was not the old teasing Cathey Russ used to know. Holding her close, he made out lines of strain on her face.

"I've terrible news for you," Cathey said.

"Not something about dad?" Russ asked quickly.

"Oh, he's all right, thank God," was the answer, "though he's involved in it. It started about a month ago, on a Friday morning. Your father was in Washington, on his way to his office. Other cabinet members and government officers were already at their desks. Everything seemed like the beginning of another ordinary day in the affairs of the government. And then, Russ, at eleven o'clock sharp, a terrible series of things happened.

"The president was assassinated. The vice president was assassinated. The secretary of state was assassinated. The secretary of the interior, of commerce, other cabinet members, the speaker of the house, the governor and chief administrative officers in every State, leaders of the armed forces and of industry and a hundred other outstanding men—all, all were assassinated, all at the stroke of eleven on that Friday morning! Everyone was rayed down; everyone bore a small clean hole burned clear through, which showed that a heat ray had been used! Your father was the only one who escaped!"

Russ, astounded, clutched at Cathey's shoulders.

"Who did it?" he asked fiercely. "And why? What happened after that?"

"It was terrible," Cathey went on, controlling her feelings. "The Federal government was left without an executive, and in every State it was the same. The wires and the air had been silenced, but the news somehow spread like wildfire, and there was chaos. People met in the greatest fear and excitement. There was a peculiar thing—no one seemed to know who the killers were. Not a single one had been caught in the act!"

Russ listened breathlessly.

"After the first day it became known that one of the political minorities had jumped into power and was bringing some order out of the confusion. Stuchen and his Black Guards—you remember Stuchen, of course—the hysterical totalitarian crank, with his henchman Carpel and his small but highly disciplined party. This Stuchen took over by simply moving into the White House and placing his men in every State.

"He loudly proclaimed that only his prompt action had saved the country from a great fifth-column plot engineered from Europe, and many at first believed him. Before long, however, they realized that it was he who had ordered the killings, to bring himself into power—but by then he was so firmly in control that nothing could be done. He dug in with incredible speed. He put down local demonstrations ruthlessly, killing right and left. Only a great gen-

eral uprising was then of any danger to him."

Russ found his tongue. "But surely the people didn't just sit and take it!" he said. "There was my father—what was he doing? There can't be so many of these Black Guards—at least there weren't a year ago when I left—and the people of a good many States are allowed to possess ray projectors. Wouldn't sniping cut down these butchers and destroy Stuchen's power?"

Cathey shook her head. "We found it's not as simple as that," she said. "There was sniping at first, but there was no general uprising for a very good reason. It happened that local plotters were always caught, just as they were about to act. It happened time after time, with perfect timing. It seemed miraculous! It got so that people became afraid to join in plots, for everyone who did so was found dead —or else was taken away and never heard of again."

"But don't tell me Stuchen's men are all mind-reading supermen," Russ exploded. "I know what they are—just a bunch of hoodlums. Surely a plot can be kept secret from such men!"

"There were people who did think Stuchen had supernatural powers," Cathey replied. "It was weeks before the real explanation filtered over the country. Stuchen is employing invisible agents! Yes—incredible as it may seem! It's the only explanation that fits the facts. Nothing else will explain why a score of local uprisings have been nipped in the bud."

Russ was amazed. "But are these invisible killers only a theory?" he asked. "Haven't you caught one?"

"No," she admitted. "We've tried everything, and nothing's worked. All we have is the feeling of certainty. We know that if it is invisibility, it's invisibility of a different kind than anyone would imagine."

Russ took this in. He said, at a tangent:

"Then dad, as the only remaining member of the cabinet, automatically becomes president."

"That's right," answered Cathey; "he succeeds in full legality, as provided by the Constitution. And because his life is of such value he's keeping in close hiding until Stuchen is overthrown."

"There's another plot?" Russ asked quickly.

"Yes, a nation-wide plot this time, splendidly organized and under your father's direction; we're all but ready to act. There's just one thing that makes your father hesitate—the invisibles. The people are in terror of them. They're an enemy they can't see and therefore can't face and fight! They've shown themselves utterly without compunction; they've killed, killed, and killed. Wherever men have disobeyed Stuchen and rallied others to their side, these brave men have been rayed down, silently, invisibly, on the street or in the secrecy of their homes, and with them others whose only crime was to listen or be near."

Cathey's voice broke. She bent her head and Russ knew she was crying. Quietly he put his arm about her.

"Where's dad now?" he asked gently.

"Out west, with a few guards, in a mountain hide-out," she told him. "He's directing the plot from there. It was he who ordered me to intercept you—though I should have done it anyway. You're to go to him; he has a special job for you."

THE SHORE was close now. Cathey pointed down the beach toward the east.

"There's a plane down there, loaded with supplies for him," she said. "You must go along the shore, Russ, till you come to it. Approach it openly; the pilot's expecting you and will take you with him. I have to hurry back to New York."

With these last words she cut the throttle and the bow of the boat dropped to the surface of the water. Ahead sounded the rhythmic murmur of the surf. Cathey sat looking quietly at Russ.

"I'm afraid you'll have to swim for it," she told him. "That way no invisible can get into the boat." She suddenly pressed a ray projector in his hand.

In that moment, rising and falling on the uneasy surface of the dark waters, Russ felt for the first time the sharp reality of her story. Over there on that lonely beach might really be waiting the strange danger of which she spoke.

"You have an important part in the plot?" he asked.

"Yes."

He took both of her hands in his.

"Be careful. Be very careful," he urged her in a low voice. "I couldn't stand it if anything happened to you. Because after this terrible situation has been cleared up I'm going to marry you."

She gave him one of her old smiles and shook her head.

"I shall never marry a man younger than myself," she said.

It was an old joke between them. She was exactly one hour older than he.

He cussed her tenderly, kissed her, and without another word slipped over the side into the water.

"Go on," she said. "I'll wait a minute."

He struck for shore. The first time he looked back he saw her faintly, arm raised toward him in a gesture of parting. The next time she was gone. He swam forward strongly, rode well in on a high breaker, and a few seconds later found bottom and was wading upward to the shore.

II.

AS HE TRUDGED along the beach his thoughts were a whirl. What a homecoming this was! How many times he had pictured himself stepping off the cradle in triumph, met proudly by Cathey and his handsome father, an adventuring scientist returning from a successful year on Mars! And now this!

Down here the slender moon gave little light, and the hungry edge of the incoming tide swirled up and engulfed his feet as he cut across curves in his haste to reach the plane. There was no sign of any invisible. Only the dim white edge of the breaking surf seemed to accompany him as he hurried along. When at last he came upon the plane he did so suddenly. It lay just out of reach of the water, a black formless shape against the lesser darkness of the background. He could faintly make out the figure of a man standing motionless beside it, the spark of a lighted cigarette in his hand.

He kept on until the man heard the soft crunch of sand under his feet and faced in his direction. The cigarette described a wide arc and fell hissing into the sea.

"Stand still!" the man warned. "Who are you?"

"The one you're expecting," answered Russ.

He stood still. The pilot approached and examined his face care-

fully with the shaded beam of a hand flash.

"No mistaking you," he said, satisfied; "you look just like your father. I'm Evans." He offered his hand, then motioned toward the ship. "Let's get going. I'm late, and this place gives me the jitters. I've counted a dozen things which might be invisibles. Did Miss Manners tell you about them?"

"Yes," answered Russ, following him. "She outlined the whole situation. What a terrible thing to come back to!"

Evans snorted. "You don't know what terrible is, yet," he said. "Wait a few days till you begin to get nerves and imagine that everything you do, everywhere you go, there's an invisible with you—in front of you, behind you, at your side, spying, watching your expression, listening for some word which may cost you your life—your own and those of us all. If you think you can imagine that, multiply it by a hundred, and that'll be what it's like."

They were at the plane now, and Evans stepped inside and told him to follow. Then, to Russ' surprise, Evans took two long knives from a place by his pilot's seat, handed one to him, and, bending low, crept back into the tail of the ship.

"Now do what I do," the pilot ordered. "Hack. Cut through the air in every empty space, from the rear to the front. Work fast. If there's an invisible here we've got to get him."

He set the example and Russ followed suit, wondering a little at the strangeness of the situation. They thrust their knives as far back in the tail as they could reach, then, turning, side by side, worked their way forward, cutting rapidly through every little part of the space in front of them.

"Seems O. K.," said Evans when they were back in the nose, "but there's another thing. Sit down."

Russ did so. Evans took the pilot's seat, set the motor humming, and climbed steeply. At a thousand feet he reached to the instrument panel and pressed a small red button.

"If there was one outside, he's on his way to the ground, burned full of holes, now," he said grimly. "This ship was specially fitted to handle invisibles. It would be just too bad if I carried one back to the hide-out."

"Where is the hide-out?" asked Russ.

"If your father wants to tell you, O. K.—but I won't," snapped the pilot. "Nothing personal; but what you don't know can't be tortured out of you."

"Then that's the way you guard against the invisibles—hack through the air with those knives," Russ said.

"Yeah—and a hell of a lot of good it does!" exclaimed Evans, his voice suddenly full of bitterness. "We've all been doing that for weeks, and not a single one's been brought down. And sometimes there were invisibles there! It stands to reason there were, sometimes!"

"It seems a good way to me," Russ remarked. "No invisible could escape those knives. He wouldn't have time to duck."

"Maybe. I hope so. But I don't believe it," was Evans' skeptical rejoinder.

He lapsed into bitter silence. Hours passed. Far below the dark earth seemed to hold steady under them, except for occasional faint clusters of lights which marked the location of a city. They came near no other plane. Dozens of times tiny lights winked in the dial of the

traffic chart in front of them, and each time Evans changed his course to avoid the plane there indicated.

AT LAST, when dawn already showed as a faint lightening of the sky behind, Evans cut the motor and started downward in a long glide. Russ, watching the instruments, had a very good idea where they were—Utah, or maybe Nevada. As they lowered he made out dark splotches which his experience told him were mountains. The pilot appeared certain, even in the darkness, of where they were. Russ asked if they were there, and he nodded.

Occasional irregular peaks passed beneath. Ten thousand feet, Russ was reading on the altimeter when suddenly Evans brought the plane's nose up and sent the upper vanes twirling. Not far below could be seen a tiny level space far up on the side of one of the higher peaks.

They dropped slowly on it and came to rest. As the motor died, an opening appeared in the face of the mountain and a dozen men with knives and ray projectors darted out. Dim lights were flashed in the two men's faces. Evans announced who Russ was and led him to one side, then with grim purpose, not speaking a word, the men formed a line at the outer edge of the landing place and advanced toward the door, hacking rapidly through the air in front. When they came to the plane they engulfed it, methodically cutting over all sides of the wings and fuselage. After this two of them went inside the plane; and only when they came out, and no invisible had been found, did they relax and step forward to meet Russ.

"Now I can take you inside," Williams, their leader, said cheerfully. "Your father is expecting you."

The door into the mountain slid to one side revealing a large dark room in which Russ could make out the shapes of several other planes. Evans stayed behind, and Williams conducted Russ through this room and into another, smaller but cheerful and well lighted, with walls of solid rock. At the far end of this room they passed into a dim passage which sloped sharply downward.

The passage opened into a last room, burned out of the heart of the mountain. Several men were there, working at crowded desks improvised of planks, and among them was Russ' father, the big, broad, gray-haired, magnetic man he so vividly remembered. On seeing Russ he jumped up and thumped him joyfully on the back.

"Russ, old fellow, you got here! I'm glad! You're looking fine!"

"And so are you!" exclaimed Russ heartliy, punching at his father's shoulder. "This mole life seems to agree with you!"

At these words a look Russ had never seen before appeared on the fine face of his father.

"Ah, Russ, boy, things have happened since you've been away. But we'll talk about that later. First, did you have a good trip?" A twinkle came to his eyes. "Catch any butterflies?"

Russ refused to take this hackneyed jibe.

"An entomologist's life is more dangerous than you imagine," he retorted. "I came very near staying forever on Mars, thanks to a little 'butterfly' that can gas a large animal two yards away. I was dead to the world for five days the first time I met this fellow—and after that I spent a couple of weeks catching a hundred of him and extracting the liquid he makes his gas with." He patted his pocket. "And I've brought it all back, to use on people

who are always asking me if I caught any butterflies."

"Never do it again," his father promised.

RUSS NOTICED a fresh red scar on his father's neck and his smile faded.

"What's that?" he asked, pointing. "Is it from their attempt to get you?"

"Yes," the secretary said simply. "I was on the street in a crowd at the time. It was the crowd that saved me; I guess the invisible couldn't get at me, and shot from a distance. Friends carried me away, and eventually I was brought here. They tell me I have to be extra careful of my life, Russ, for I'm the only surviving successor to the presidency. Of course they're right."

"A sort of queen bee, protected by all the members of the hive," said Russ. "I'll bet it's the toughest thing you ever did—just sit here and wait."

"Ah, no, we work!" the secretary replied. "There's been a great country-wide revolt organized in this room. The main headquarters are in New York, but the work was done here.

"Russ"—he took the young man by the shoulder and led him to a bench along one wall—"Russ, I've got an assignment for you, a tough, dangerous, necessary job. I've given it to many others, but everyone so far has failed. Several have been found dead. But I think maybe you can succeed. I have a very high opinion of your resourcefulness."

Secretary Edgecombe was deadly serious, and Russ fidgetted a little, embarrassed at the compliment. The big man looked closely at his son.

"I want you to trap an invisible."

This *was* an assignment. For a moment the young man was silent; then he said as levelly as he could:

"I'll do my best, sir."

"Thank you—I know you will," his father said warmly.

"You want, of course, their secret. Then you'll use it yourself and set up a body of counter-invisibles."

"Exactly. It will do the trick! The invisibles are the backbone of Stuchen's power. You see, there aren't so very many Black Guards; they could be overcome in short order if we had only them to deal with. But behind them are the invisibles, and they, I tell you, are utterly ruthless, killers every one. Invisible, immune to danger, they strike with deadly certainty in the back. The people are in terror of them, and most are afraid to take part in an uprising. You wouldn't blame them, either, if you'd seen what they've seen; and you'd be mighty proud of the millions who are awaiting our signal to act."

"Why are you so sure that there are any invisibles, when you've never caught one?" Russ asked.

"We're positive," answered his father. "Time after time there have been killings when no visible person has been near the victim. Always there is a burned hole, made by a heat ray, usually in the back. And there is other evidence."

"But why haven't you been able to bring one down with the knives?"

"We simply don't know," answered the secretary frankly.

"Do you think they lack substance?"

"They must have substance to hold and operate a ray projector," the secretary said. "Apparently something more than mere transparency is involved."

"Have you considered that the invisibility may be due to a speed-up of movement? I've heard of drugs that increase the speed-of-moving potential. Anything that moves fast enough won't be seen."

"We've checked that with our scientists, and it's out. Those drugs will allow a speed increase of not more than eight percent. To get invisibility they'd have to jump the speed nearly ten thousand percent. That's terrible. Assuming, however, that such a drug exists, the man who could use it does not. To reach invisibility he would need muscles that are far more than ten thousand percent stronger than the normal. Unthinkable!"

Their talk was interrupted by a man who hurriedly entered the room.

"How many men came here with you from the front?" he asked Russ directly.

"One—Williams," answered Russ, wondering.

Williams stepped forward. The man turned to the secretary.

"Trouble, I think, sir," he said. "The detector in the passage shows two, but along with them is a slight curve that we can't explain!"

III.

THE MAN turned back to the passageway, the secretary, Williams, Russ and all the others crowding close behind. Halfway through they stopped and examined a photocell apparatus hidden behind a concealed door in the wall. Russ saw a tape feeding through it. Secretary Edgecombe examined the line on the part of the tape shown him.

"See," the man said, "these two big curves, and that tiny one. The big ones are typical for the passage of a man, but what could have caused the little one?"

"It looks like the one that time Welton was found dead," the secretary said, frowning.

"No human being could have made it," the man said. "No one could move that fast."

"Not unless he was as thin as a pencil," said Russ. "Are you sure the invisibles are human beings?" he asked his father.

"What else?" was the answer.

"Let's see something," Russ said thoughtfully. He closed the door, stood to one side, and flicked his finger across the beam. Then, under the light of the flash, he looked for the line this made on the tape.

It showed as a small curve, very much like the other.

"One thing at least is certain," Russ stated crisply: "Whatever made that first tiny curve blocked the beam no longer than my finger did. If it was as thin as my finger it was moving at the same speed as my finger; if thicker, proportionately faster. Nothing human can move at that rate, but some small object, say a stick or a stone, thrown by a man or dropped from the roof, might. Let's see on the floor."

All stepped back and together searched the floor of the passage. Nothing was found.

As they left off, Evans came racing up to them from the front.

"I've just found some false flooring in the tail of my plane!" he whispered to his chief, in great excitement. "It must have been put in at Ainsley's, where the plane was loaded. There was space for one man! This was there!" He held out a hand projector. "The invisible must have dropped it!"

The secretary turned to Williams.

"Gas!" he clipped. "And tell every man to hold tight to his weapons and mask!"

As one man the group sprang to action. Before Russ, pulled along by his father, reached the room beyond, an alarm bell was clanging and his father's order was being yelled out from many throats. At the door someone thrust gas masks and knives into their hands as they passed through, and Russ, like all the others, quickly put his mask on. He saw the cabinet from which they had been taken swing shut with a click. Then at once, it seemed, the room was filling with a dense brown haze, and the lights of the room became but dim horizontal rods.

It was very silent when suddenly off to one side Russ heard a commotion in the darkness. He pressed in its direction, shoulder to shoulder with others drawn there like himself. He had not moved far when he received a violent shove that spun him all the way to the far wall, where he crashed to the floor, dazed. As he picked himself up he heard the sounds of a scuffle somewhere ahead.

He was groping toward the place when he felt a breeze on his neck and noticed that the darkness seemed thinner. Someone apparently had turned on the ventilators. Rapidly the air cleared, revealing, ahead, a tightly pressed group. Worming his way through he made out the form of a man lying on the floor, held down by every masked man who could lay a hand on him.

Even as he took this in everyone began letting go their hold and easing back. Russ saw why. The man on the floor was not an invisible but a member of their own group. He lay there dead—without his mask. Nor did the mask lay anywhere about.

SILENTLY, acting together as if well drilled, the remaining men of the group hurried to the outer room, Russ following close behind. There

they formed in a line against the outer wall and began an advance through the room, hacking with their knives through every empty space in front, and cutting across the surface of each plane as they came to it. Soon they were in the middle room, and then in the passage. The invisible would either have to fall back before that wall of flashing steel or, without his weapon, try and break through.

Russ, one of the first to enter the inner room, saw a bunchy something in the far corner. Recklessly leaving his place in the rank he advanced close enough to see it was the doubled-up form of a strange man dressed in peculiar, close-fitting clothes, with a bulky life-beltlike thing around his waist. On his face was a gas mask—one like those worn by the group. His hands were on his throat, and his whole body jerked with rapid convulsive movements.

As Russ peered the others gathered around him and stopped, all holding their ray projectors on the strange figure. But then an astounding thing happened. The man with incredible rapidity got to his feet, leaped forward and disappeared! Russ' hair stood on end. He had moved in great blurry jerks—and then he was just no longer there! A dozen rays pitted red the wall at the place where he had just been lying, but there was no sign that they had found their target. And then seemingly at the same instant the motor of a plane back in the outer room coughed into life! Had he slipped through them?

Russ dashed to the front, followed by all the others. He found the door to the outside open, and one of the planes, the one he had arrived in, easing through, its vanes already lifting it from the floor. Before they could reach it the plane was outside, well off and above the little landing place, and climbing rapidly into the morning sky. Every man swept it with his ray, and red lines and streaks of smoke showed it was hit, but it continued to rise and soon was a mocking black patch out of range.

Williams tore off his mask and swore.

"And that's our fastest plane!" he cried.

Evans wheeled toward the secretary.

"I'll go after him in another plane," he begged. "He may not be able to keep going. He certainly got a whiff of the gas!"

"No—too faint a chance," the secretary flashed. He turned to the others.

"Men, no need to tell you how serious this is," he told them. "We'll have to leave here at once, before that invisible brings back others to blast us out." He rapidly gave them some orders, then turned again to Evans and his son.

"Russ, you and Evans get back to New York. Tell Cathey to expect me about noon, to take me to headquarters. I'll stay and pack, and follow along after. Take the smallest plane. Evans, you warn Ainsley. Be careful! On the way tell Russ how to contact Cathey. Tell him about the invisibles, too—about everything that's been tried to catch one. Then, Russ, you go to work. I want one of those invisibles, with his apparatus! Trap him! It looks like ultraspeed, in spite of what I said. Cathey will arrange for any help you need. Gas looks best, but that's up to you. Now go. Hurry!"

"I . . . I'm awfully sorry about bringing—" Evans began, but the secretary would have no more.

"Forget it!" he thundered. "You didn't load the plane, did you? Get going!

"As for you, Russ, I'm depending on you! We all are!"

IV.

At a little after nine that morning they set down at White Plains and twenty minutes later Russ had left the airbus at Times Square and was entering a large office building in the west Forties. Evans had given him the address. This time, at the secretary's order, he had talked freely.

In the lobby Russ went to the cigar counter, placed the fingers of his right hand on it in a certain way, and so made contact with a man named Handley, who ran the concession and also was the building's notary. Handley at once sent him to the corner visiphone booth, telling him to wait inside while he tried to arrange contact with Cathey.

Hand on the call lever, pretending to be waiting for a number, Russ turned over in his mind the information Evans had given him about their attempts to trap an invisible and learn his secret. Here and there, all over the country, on a fairly wide scale, they had tried leaving poisoned food around; tried going alone into a suspected room and spinning rapidly around, ray on; tried gas; tried cutting with knives; and used variously, strings and wires, photoelectric cells; powder, to get a footprint, and lights, to get a shadow.

The poisoned food had never been touched; the ray had only sliced dangerously through the walls; the knives had never yet caught anything in the air. No wire had ever tripped one, though black threads had several times been mysteriously broken. Powder had been messy and a waste of time, and as for lights, they had yet to throw an invisible's shadow. Nothing had been of any use whatever except gas, in the one instance that morning, when they knew an invisible was present. Gas did seem best. It had not been tried much before because it was dangerous and hard to control. Russ had just seen how dangerous it was, but he felt quite willing to take risks—under his own conditions.

He kept remembering the terrifically potent gas of the Martian insect, resting even then as a liquid in a metal vial in his pocket. That stuff would certainly send into dreamland any invisible who breathed it—but the least whiff would also send himself there. The main problem seemed to be, how could he use an effective gas mask in the same room with an invisible who could see everything he was doing and of course take steps to thwart him? How do this when the man could—and would—easily ray him down at the first suspicion of danger? That one he had seen had moved mighty fast. So fast that he was sure he was dealing with ultraspeed. And not produced by drugs, either—or why the belt?

He was deep in the problem when a familiar face appeared outside the booth and smiled in at him. He opened the door and was about to step out when Cathey, to his surprise, crowded inside with him, practically in his lap, and closed the door. He beamed.

"Why, how intimate we're getting!" he exclaimed, but Cathey sobered him with her first words.

"Strictly a device for talking without being overheard," she told him, and got right down to business. "Have you seen your father? Is he all right?"

Russ told her in a few words what happened at the mountain, and gave his father's message. "But I don't see why dad can't go straight to

headquarters without bothering you," he concluded. She explained:

"We allow the very minimum of coming and going there. It's necessary, for secrecy. It would be just too bad if the invisibles found where it is. My one job is to act as headquarters' contact with the outside."

"I've always felt you were a very necessary person," Russ said, but then added soberly: "What if they caught you?"

"I guess it would mean the Citadel, where they 'go over' all the important prisoners."

"The Citadel? What's that?"

"What everyone calls the Communications Building, since Stuchen made it his headquarters. You know the place—on Governor's Island. The whole island's been taken over by his party workers. They live and sleep there; he doesn't let them leave.

"But it wouldn't spoil anything if they got me," she added, smiling a little, "though at first there might be a little trouble rearranging contacts. Even if they found our headquarters, they couldn't stop us, though that would be a blow. You see, the uprising is to be directed by radio, and several alternate stations have been set up in this area, anyone of which would serve in case of emergency."

"I don't like to have you hobnobbing with all sorts of strange men," Russ said shortly.

"We must all share the risks," was the grave reply.

"I mean, you're meeting entirely too many men," Russ said. He told her of his assignment. "I warn you, when I catch one of these guys and learn his secret, I'm going to come see you on an invisible snoop. You'd better watch your step, for if I find you smiling at any man I swear I'll not marry you."

"Don't worry," Cathey retorted; "I shall never marry a man younger than myself!" But she had to smile.

Russ kissed her, and she was quite willing; but she was full of business and quickly broke away, and after waiting a few minutes he, too, left.

OUT in the street, Russ took a deep breath. Now for work! He knew at least the first thing to do. He wanted an atomizer for his gas liquid, or, better yet, a commercial spray gun, something like an old-fashioned pistol in operation, but, preferably, not dangerous looking.

He was able to buy exactly what he had in mind, and in a quick trip to the laboratory of a chemist he knew he transferred safely the liquid in his vial. Then, still without the essential plan, he headed back toward Times Square, trying to formulate one.

At the corners the familiar policemen still stood directing traffic, but the real bosses, he knew, were the smartly uniformed Black Guards who patrolled the sidewalks in pairs, very conspicuous among the late morning throng of shoppers. Russ examined curiously the faces of the people he passed, and found their expressions revealing. Some appeared cheerful enough, but there were far fewer smiles than in the old days, and far more signs of fear and strain. Some whom he passed were no doubt Stuehen's agents—and other men, passing unseen among them all, his invisible killers.

Those invisibles—

If he could get one into a locked room with himself, and spray out a little of his gas, and keep from breathing it himself, he would bring him down sure. But by what trick could he keep from breathing the gas himself, without the invisible's suspecting? What trick? He could not imagine, unless it was simply to try

and hold his breath. At night, in pitch darkness, this might work, but it was now just short of noon, and he had to act at once. It was a dangerous business, all right; at the slightest ambiguous motion it would be good-by universe.

First was the matter of getting an invisible into a room with him. He could think of only one fairly certain way. He would take a room in a hotel and send an anonymous note to the headquarters of the Black Guards, saying that a spy was in that room—himself. Then wait. First, of course, hatching a way to deal with the invisible when he came.

He took a room on the sixteenth floor of a small hotel on Forty-sixth Street, just off Fifth Avenue, and when alone, flopped at once in the easy-chair, a little tired from his activity and lack of sleep in the last twenty-four hours. Now he could think out a plan, and do it quickly, too.

He lit a cigarette, then had a look at his spray gun. It was largely black plastic—an odd-looking thing with a short barrel, cylindrical handle, and long, slightly curved lever which served as trigger. Holding it idly in the palms of his hands he sat motionless for some time, mind set on his problem. The smoke from his forgotten cigarette rose vertically up from his fingers and formed a faint cloud in the quiet air below the ceiling.

THE SOLUTION would not come. The cigarette burned his fingers. He dabbed it in the ash tray and lit another.

He noticed a peculiar thing. Before, the smoke had risen straight up, but now it was not doing that. It tended to spread out rapidly to each side, in both directions. Both! A draft? But there had been no draft before. And what draft could cause the smoke to spread evenly in opposite directions?

Fear swept over him in one engulfing wave. He was suddenly sure he was being watched, that there was an invisible in the room! His whole inclination was to run, run from that place of danger, but he remained, tense, locked with the realization that it was too late for flight, that he would have to stay and see this thing through, whatever the outcome. With all the control he could muster he tried to force his fear from his face until he could think what to do.

But his thoughts were turmoil and he couldn't begin to concentrate. Irresistibly fascinated he watched the smoke. Sometimes for seconds it would rise in still air, then again would come that peculiar two-way horizontal diffusion. His fear, instead of abating, increased. Time was passing! At any moment the invisible might act!

And he was not prepared! He had not the slightest idea how he might bring down the man—not even how to escape, if the man was out to get him!

The sweat poured out over him. He knew it was giving him away—and sweated all the more. He felt he could hardly breathe. He was sure the invisible was staring right into his eyes, reading his every thought and emotion, perhaps with weapon in hand, ready! He had a ray projector himself, in his pocket, but under the circumstances did not dare reach for it and try to use it.

Still he had to do something! And quickly!

One thing he remembered—if he could release the gas but hold his breath, the other might breathe first. The gas was colorless and odorless—that part was all right—but to suc-

ceed he would have to act a part, a very convincing part, at a time when his heart was beating like mad and he felt half suffocated!

Time was passing! He would have to try! He would somehow have to mystify the invisible!

With a great effort of will he got slowly to his feet; then, forcing himself to perform naturally every little motion, he stood a moment as if in thought, walked to the door, opened it and peeped out, closed and locked it, and again stood as if thinking. Next, expecting every second to feel the hot slice of a ray through him, he stepped to the inner wall, turned and looked attentively at the window, slowly raised his spray gun, and pointed it at an upper corner. Concentrating closely on that spot he unobtrusively drew as deep a breath as he dared and deliberately pulled the trigger once and again and again, continuing to fix on the spot and praying inwardly that his mystification might fool the invisible into continuing to breathe normally.

Immediately he became aware of a shape enlarging at his side. Rigidly he held his position, not daring to move his eyes. He thought he heard a faint thump, as of a body falling to the floor. At the limit of his breath he jumped toward the window.

As he did so his eyes swept over a hard figure on the floor—a man lying sprawled out and still, with a life-beltlike apparatus about his waist.

He had him!

He jerked up the window, leaned far out and breathed.

V.

Russ kept his head out as long as his impatience allowed, then, tentatively sniffing small samples of air in the room and noting no effect, he turned and had a look at the man.

He was young, dark, foreign-looking, with coarse features—the hoodlum he had expected. He wore the same tight peculiar uniform as the one in the hide-out, and stuck in his bulky belt was a ray projector.

Russ removed the belt and placed it about his own waist. Curiously, it seemed to resist his handling somewhat, as if there were a small gyroscope somewhere within its sectioned metal length. As he buckled it on he had a sensation of nausea. He stepped to the window, but the feeling passed at once, and then, suddenly, he had forgotten it altogether.

For at the window he had the shock of his life. Without thinking particularly about it he had expected to find himself invisible, but he found he was not invisible at all, but that the outside world, rather, was changed. It was a startling change. Above and below him, everything that normally moved, now seemed frozen into immobility. Planes stayed fixed in the sky. Men and automobiles stayed fixed on the streets. It was as if some mighty power had ordered the unsuspecting world to be still—and just as they were at the moment of the command, men crossing streets, automobiles turning corners, planes in the middle of a bank—all had been arrested, fixed like insects on a pin, just as they had been caught.

Russ gaped, hardly believing his eyes—and then he saw that he was mistaken. There was movement, but it was infinitely slight. By looking long and hard he saw that the automobiles were moving, the slightest movement imaginable, and it was the same with the men on the sidewalks, and the planes.

The identical phenomenon oc-

curred a few inches from his eyes. A fly, he saw, was hanging against the glass just above—hanging like a hummingbird, only its rapidly moving wings and a minute lateral drift indicating that it was not dead and loosely, somehow, fixed there. Infinitely slowly it moved along the pane, sideways for the most part, but forward at intervals till it touched. It was trying to get out. And eventually, as he watched, it did get below the frame and hung headed for the clear.

Experimenting, Russ pushed to one side a small lever on the front of the belt. Again came the attack of nausea, and through it he saw normal movement jerk back to the world. The fly, which before had only been headed for freedom, now in one buzzing sweep flashed out of sight.

Russ had then the basic secret of the invisibles, and understood why none had ever been trapped. The belt had nothing to do with transparency but was a time-speeder. Its wearer would be as solid and opaque as normal, but for him the time factor was altered, many times multiplied, so that if he kept moving he could no more be seen than the rapidly-moving spokes of a wheel. Knives would be a joke. He could easily dodge past them, just as he himself could have dodged that fly.

The belt was without doubt the first embodiment of the principles of time-space in a nonlaboratory device. Somewhere within its bulky circle the cosmic equation of relativity had been broken down and reassembled, with the time factor made adjustable to the human will!

Russ stood lost in the marvel of this achievement. Stuchen certainly had never invented such a belt. But who had? Was there some genius behind him? Vreeman was the only genius he had heard of who had done practical work in this field. Vreeman—who had disappeared two years ago, and whose body had been found floating in the Harlem River several months later, dead, then, only a few hours, and not dead from drowning. This was now immensely significant.

But there was no time to waste on such reflections; he had to hurry and report his success to Handley, so that his father, when he arrived, could see what might be done about duplicating the belt in numbers.

Rapidly he swapped clothes with the unconscious agent, replacing the belt and sticking under it the other's projector and his own spray gun. Then, making ribbons of the sheets, he tied the man securely and pushed him far under the bed, arranging the top to make it appear undisturbed. He would have to leave him there for the time being. On leaving the room he switched on the "Don't disturb" light, locked the door carefully, and turned the lever on his belt to the invisible position, and, thus obliterated, took the stairs all the way to the street.

RUSS STEPPED OUT into a fantastic world. The shop fronts and street were familiar, but the people on the pavements—had everyone been transformed into wax manikins—realistic manikins, short and stout ones, unlovely ones, manikins carelessly dressed—all by some hidden clockwork, moving slowly, ever so slowly, ahead?

All Forty-sixth Street was a waxworks show, but thrillingly more—for every figure there was a real, living person, in his own real clothes, by the miracle of Russ' time-rate differential suddenly stopped short almost without motion, caught unaware while going about his business

of living. Had they stood completely immobile, like real wax figures, that would have seemed less odd than to see them drifting fraction by fraction of an inch forward, unaware, grotesquely, stupidly unaware, that they were about to fall.

For every one was off balance, and at every instant Russ had the unpleasant feeling that they would surely fall. He knew, of course, that walking consists of repeated cycles of losing balance forward, then bringing up the rear leg just in time to stop the fall—but the cycle here operated so slowly, and the people were off balance so long, that it seemed that the rear leg would never get to the front in time. It gave him a peculiar, restless feeling. He found himself mentally urging the rear legs to hurry.

Russ stared with fascination on the faces of the figures. He had never realized how used he was to seeing only completed expressions on people's faces, the *arrived.* expressions of their moods, but now he discovered that in between these was a series of others, made by the muscles in transition, which were so quickly passed over in normal time that they were not noted.

These transitional expressions often could not be read. Russ would never have guessed that motion, and its rate of change, were such important factors in making judgments of faces. This must be the reason so many of the faces he passed looked stupid, smug, silly, self-centered, he thought. Some were grotesque. Eyes glared, mouths gaped, lips held peculiar twists, the two sides of faces moved separately and inharmoniously. One woman's tongue stuck out the corner of her mouth. Another was either just beginning to sneeze or was smelling something unpleasant—he could not decide which.

There was something else about the expressions, something elusive that kept irritating him. He smiled when at last he realized what it was. No one was paying any attention to him! Naturally—since he was invisible to them—but he had not been thinking of that, and, used to attracting the usual amount of attention from the people he passed, he had unconsciously been feeling neglected!

Motor traffic seemed to move faster than it had from the window, but the difference was negligible. The lines of automobiles would be going thirty or forty miles an hour, normal time, but now he stepped leisurely and without the slightest risk between them, once even taking time to note and classify a grasshopper, family Acrididae, wedged on one's grille.

A little beyond Sixth Avenue he passed an overdressed and very snooty matron who looked indifferently right through him. Feeling it would have been no different if he were close in front of her and visible, Russ succumbed to the temptation to experiment, and returned and crossed her path only a foot from her nose. The nose did not move. He tried it again, slower, and still her nose did not come down. For a second he felt like giving her a gentle kick, to see if she would notice that—but instead he repeated his scientific experiment once more, closer to his subject's nose this time, and still more slowly. This at last started it down, and at the same time, very slowly, the woman's eyebrows floated up and a peculiar painful expression began to assemble on her face. He didn't bother to wait for more. The experiment was a success. He'd made her notice him —after a fashion.

Russ had been so occupied by the visual changes around him that at first he did not give much attention to the audible ones—but there the difference was even more striking. Trucks passed, policemen blew their whistles, people opened their mouths in speech, but the only sounds he heard were a faint jumble of unrelated and meaningless rumbles and clatters and occasional squeaks. The reason for this became clear. Sound waves travel relatively slow, about a fifth of a mile a second, and the human ear's tange of sensitivity is limited. Both the pitch and total energy of the sounds would be divided by his high time factor, so the altered wave would rarely have pitch and intensity enough to cross his lower threshold of hearing. Put baldly, one second's worth of normal sound was spread out over scores and maybe hundreds of seconds; was spread too thin to hear. Only the unfamiliar supersonic waves of high intensity were registering, divided down into sound which had no meaning.

It was not until he reached the wider spaces of Times Square that Russ felt the fantastic phenomena of his time differential in its full magnitude. There on all sides, pointed in every direction, stuck thousands of the almost-suspended, off-balance figures. The usual crowd noises and roar of traffic were replaced by such a cacophony of clatters and rumbles and pin point squeaks that the total effect was weird and even frightening. He looked hard for men with normal movement, but could see none. They would, of course, be invisibles.

He became very curious to know his exact time rate, and when he passed a jeweler's stopped for a moment before the chronometer in the window. The large hands were pointing to 11:54, but, while he watched, the second hand did not move at all. He waited for it to jump to the next second mark, ready to try and estimate his sensation of the duration of the interval between two jumps, so as to get a conversion factor. The human eye received the illusion of fluid motion from twenty separate images a second, he remembered, so that to re-

main invisible his time factor must be far above twenty. He suspected it was around two hundred times the normal, so that one second of normal time would be about three minutes to him.

Waiting, with these thoughts in his head, he chanced to look to one side—and almost jumped, he was so startled at what he saw. Fully a dozen people were looking right at him, expressions of pure terror on their faces. He had thoughtlessly been standing still and so become visible, a frightening figure in tights and lifebelt, with small jerky movements and blurry outlines!

It was a lesson. He ran from that place, invisible again, swearing he'd never again forget to keep moving. He did not walk after that, but, feeling he had been losing time, trotted all the way to the building where Handley had his business. The man was there, a worried-looking statue behind his counter.

Russ had to make contact with him without scaring him out of his wits, so, thinking rapidly, he slipped around the counter, looked for a pencil and scrap of paper, wrote several words, stuck the note between two of Handley's fingers where they rested on the top of the case, and was off to the corner visiphone booth, where he switched himself to normal time rate. A moment later Handley stepped into the booth with him.

Russ told him rapidly of his success; but Handley had news himself.

"They've raided main headquarterys," he whispered; "killed everyone there; wrecked the place! And at the same time they picked up Catherine Manners! They came ten minutes ago and took her away!

"But your father is here. Come with me."

VI.

STUNNED, Russ followed Handley to the little room where he did his notarial business and entered alone. His father was there, an aroused lion. The big man did not greet his son but, eyes caught by the belt, eagerly stepped forward and examined it, asking crisp questions about its operation. Russ told him what little he knew.

"You've been damn fast, Russ," he acknowledged then, straightening up, "but I'm afraid this comes too late. Too late for duplication, anyway. They've raided main headquarters—killed every man and wrecked all the equipment."

"And picked up Cathey," Russ said with tight lips. "Handley told me."

"That's not all," the secretary went on grimly. "A fatal thing's happened. The men who did it got a list—a list of our local leaders and their headquarters all over the country. Stuchen now has our whole plot! Within hours every man whose name is on it will be dead, or as good as dead! Unless—" He broke off.

"Unless?"

"But of course I can't let them," the big man said, as if thinking aloud. "They've forced my hand." He turned to Russ and repeated the words, decisively this time, and with rousing vigor: "Well, all right then, they have forced my hand! We strike, Russ! At once! They must not get those men!" He pressed a button on the desk. He seemed to fill the little room now.

"The invisibles?" reminded Russ.

"We'll chance them. Have to. As we go we'll try to find ways to combat them; ought to be able to, now we know their secret. But first come those leaders. I think we may

be all right if we act fast. But we have to act fast!"

The notary came in.

"Handley, we act!" announced the secretary. "Get out to a phone and check on our nearest alternate station—one not on the list. If it's been raised try the next. I want the nearest one left. Use the sound side only, of course. Then find out what's keeping those guards and cars. Get others; we'll use the first that come. Hurry man!"

Handley skipped out, and the secretary turned.

"Russ," he said, looking at his son closely, "there's just a chance that a resourceful man wearing that belt could get into the Citadel."

"And?"

"Find and destroy our list, before those names are sent out over the country."

"I think he might, dad," Russ said evenly.

A faint smile lightened the big man's face, then was gone. He went on:

"The man may be trapped. We attack with our rays within fifteen minutes. Automatically their thermostats will send up an invisible screen. That screen will probably be terrific, for we've learned Stuchen has been accumulating every accessible gram of U-235 there. No one will get through while it's on."

"I see. Where's the list most likely to be?"

"In the radio rooms, next to the top floor· but possibly in Carpel's office, on the top floor, or even Stuchen's, on the roof."

"What does it look like?"

"A thousand names and addresses, on about fifty yellow pages, fastened together."

Russ saluted. "O. K., dad," he said, and dropped his hand to the lever on his belt; but his father put his arm up and stayed him. Dropping the indirection now, and looking straight in his son's eyes, he said:

"Russel, it may be that you won't come back. I want you to know that I must risk that as much as you. I must ask more of you than I could of another. You understand, don't you?"

Russ never admired his father more than at that moment.

"I understand," he said quietly.

"Cathey's probably in the Citadel right now," the secretary went on, "and you know how I must feel about her. If we strike hard we may incidentally save her. But—she's not indispensable. You understand?"

"I understand," Russ answered again.

The secretary held out his hand. Both smiled a little but no other word was said. Slowly and deliberately, so as not to startled his father, Russ pushed at the lever on his belt and vanished.

VII.

Russ reached the street undecided how to try and crash the island in the few minutes he had. Choice narrowed to the tunnel and the bridge, but both seemed highly risky, for they'd be minutely watched by Stuchen's invisibles. He wondered if he hadn't best swim it. In half a second he ran the third of a mile to the Hudson. The tide was going out! That decided him.

He turned south, and following the river trotted all the way down to the Battery—distance four miles, time ten seconds. There, first thing, he ran through a restaurant, scooped up two large handfuls of butter in the kitchen, and greased heavily the entire surface of his belt, to prevent

the water from penetrating it; then he at once started looking for a box, under which to float down to the island. He knew he wouldn't be able to swim the half mile openly without being spotted by the island invisibles. His heavy belt gave the high time factor to only a small zone about his body, he reasoned, and the friction between contiguous fluid particles on either side of the boundary, negligible at high speed in air, would, in water, result in terrific friction and drag and therefore splash.

He found what he wanted at the end of a private pier just above the Park, and choosing his moment jumped with it unobserved over the side. At once he burned peepholes in it, from within, with his ray; then, completely hidden underneath, he edged it out till it was caught in the strong channel current. At his time rate he seemed barely to move until he ventured to help by fluttering gently with his feet. The belt pulled him down, so that he had to hold on to the box with both hands.

An eternity seemed to pass before he arrived at the tip of the Battery. Not far below, unable to stand it any longer, he switched himself to normal time rate for a little and enjoyed the illusion that he was making better speed. Gradually the hundred floors of the Citadel rose higher, in all the breathless beauty of its clean-lined chrome and crystal flanks.

As he drew close he stopped his flutter and very slowly pulled the box lower in the water. Hostile eyes were no doubt scrutinizing his cover —the eyes of invisibles whom he saw stationed by batteries of great heat ray projectors of the field type. He saw them clearly, group by group, as he passed, and hardly dared breathe when one was faced in his direction. In that frozen waterscape their eyes would catch the slightest unnatural motion of his box.

Ever so slowly he passed by the Citadel and down the island. Opposite a group of warehouses he began cautiously to let his box rise to its level of free buoyancy, taking all of an apparent two minutes to do it since there was another group of invisibles at a battery not far below. It hardly moved when he let go; and no eye saw him sink, then make strenuous underwater efforts and at last arrive gasping at the bottom of the vertical concrete bank.

Hardly pausing he worked his way to a nearby ledge, just above the waterline, and drew himself up on it. Then began the most intolerable period he had ever experienced as, for two hours, quick time, he lay and sunned himself, to dry his clothes before venturing further. He had no choice, for he did not dare be seen wet. He cleaned the butter from his belt, he saw that his weapons were in order, he chafed and he fretted, wondering what progress the revolt was making, and trying to guess the details of its strategy; but the sun had not perceptibly moved when, dry at last, he climbed cautiously to the top of the bank, slipped unobserved around the side of the nearest warehouse, and stepped boldly on the street, headed back north to the Citadel.

He slipped like a ghost among the normal-time statues on the walk, and, to his relief, passed without attracting attention from the several invisibles he met. With increasing confidence he made his way through clusters of Stuchen workers and Black Guards and entered the lobby of the great building. He had made his plan. Hardly glancing at the invisibles pacing up and down before

the stairs and elevators, he looked for the doorway leading to the basements. He found it unguarded, and waiting for a good moment ducked below, his goal the elevator pits.

QUICKLY Russ sought out an express that went all the way up, climbed the narrow iron-runged ladder to a place just below the ground floor, and waited for the car to come down. He was going to get to the top of the building quickly and unseen by riding in its understructure. That was his intention. He waited and waited, eyes fixed far up in the diminishing shaft; but he could not even see the car, and it did not come in sight. He wasted nearly a quarter of a second, normal time, before he noticed the snaillike motion of the nearby cable and realized that he had been thoughtless—that he might have to wait an hour for the car to come down.

That meant one thing—climb—and climb he did, rung by rung, far up the dizzying shaft, passing the almost motionless car on the seventy-second floor, and not stopping till he had reached the ninety-seventh. There, without resting, he explored the shaft on all sides, peering hard through the dim light in a search for the conditioned air piping. He had been certain that it, with all the other service pipes, would run up one side of the shaft, but he found this was not so. They were not there.

He swore softly. Time was very short, and this might be a serious setback. He had to have that pure air pipe, for he intended to melt through it with his ray projector, stick his spray gun into the hole thus made, and squirt till the re-

ceptacle was dry. He was sure he would find no obstacle to a quick raid through the upper floors after that.

He would still do it, of course, but now he would have to take risks—leave the shaft and search out the pipe, wherever it was. Well, there was no help for it. Faster than a construction worker he made his way over and around the beams and trusswork till he was at the nearest door. At the top he found the springed arm which would bend inward to make an electrical contact when the car was stopped there, thus energizing the solenoid of the compressed air system which opened the door.

For a moment Russ switched himself to the normal and listened. There was no sound. Feeling safe, then, and again at quick time, he pressed the arm and the door slid to one side. At once he was in the corridor. It was empty, and all the office doors opening into it were closed except the nearest one, which was slightly ajar. At one side of the elevator doors there was a blank space of wall, the front, no doubt, of a separate shaft containing the service pipes. Beyond this was an arched opening leading to the stairs. Softly he tiptoed over and peeped around the corner—peeped full into the face of an invisible, guarding the landing!

The man came for him, weapon in hand. Russ turned and ran. The first door he came to was the one which was slightly open, and never pausing he darted inside. He found himself in an anteroom into which opened the wide doors of a large office, filled with dozens of desks and rows of filing cabinets. A score of clerks were sitting informally around their desks, many with food in their hands. It was the lunch hour.

Russ ran straight into the room among them, looking for a way out, or at least a place to hide. In full career he saw a door at the left and

changed direction; but as he did so one foot fell on a banana peel dropped by one of the lunchers and he slipped and went crashing into a metal desk.

Lightning exploded in his brain and for some time all was dark. When he came to he found himself lying flat on the floor, a man with a crooked jaw at his side and a ring of normally moving office workers further back. His belt and his two weapons were gone. He was a prisoner.

VIII.

THE CROOKED-JAW man flourished a ray projector and ordered him to his feet, after which he was hustled out into the corridor and into a waiting elevator—the very one whose door he had come out of. As they went, Russ cursed himself. He felt like a criminal to have let his father down so—and more than a criminal, a fool. Hardly inside the building, and to be taken prisoner! He, with all his chances, and with so much depending on him, to slip on a banana peel and lose everything! It was both tragedy and farce.

They got out on the top floor and passed through the nearest door into a large reception room. Cathey was there! She was seated between two guards, each of whom held her by a wrist. Russ started, and Cathey's lips parted for impulsive greeting, but both got control in time, and their recognition passed unmarked. It was better so; but the effort wrung Russ' heart. He might never see her again.

A uniformed Black Guard, who appeared to act as secretary, opened a door at the far end and showed them into a large and magnificently-appointed office. At a mammoth desk, in the corner between two diffusing glass walls, sat a block-uniformed little fat man with a piggish face almost the color of lard. Before him lay Russ' belt and ray projector, and in his hands was the spray gun, which he was examining curiously. He looked up as they entered, belched, and waited for them to traverse the room, as relaxed as if he had nothing else to do. For a second Russ felt he was a nonentity, ridiculous at that big desk, but when he came closer and saw the man's small sharp eyes he changed his mind. The man with the crooked jaw addressed him most respectfully.

"This is the man, Mr. Carpel," he said, as if he had just been talking to the other about him.

So this is Stuchen's No. 1 man! —thought Russ on hearing his name. He looked at him more closely, trying to size him up.

"What is this?" Carpel asked in a whiney voice, angling his head and holding the spray gun in a little away for a more distant view.

"We haven't determined that yet, sir," Russ' escort answered. "It was found on the prisoner when he was taken."

"What is this thing?" Carpel asked again, this time looking at Russ.

"A folding umbrella," was Russ' scornful reply.

Carpel gave him a long unreasonable look, but did not show that he minded the retort. Without taking his eyes from Russ he said:

"Zimmer, unless fingerprints lie, this is young Edgecombe." A second later he shot out, "Where's your father?"

"He's well, thank you," Russ said.

"Well, he'll be a sick man shortly," whined Carpel easily, without pause of a second. "We have a little list"

—he raised a sheaf of yellow papers on his desk—"I suppose you know what it is. Every name has just been sent out over the air, along with orders to the local authorities to take prompt and thorough action. Yes, he'll be a very sick man, very soon."

Russ' heart fell, but clutching at hope he answered boldly:

"You're lying. That list was stolen only twenty minutes ago. You couldn't possibly have sent out all those names in that time."

"We had two hundred times twenty minutes," was the even answer.

Despair swept over Russ. He was too late, too late. There was no doubt whatever that Carpel was speaking the truth. The radio man had worn a belt. The list had gone out in quick time.

CARPEL SMILED easily at the expression on Russ' face; then he belched again and looked back at the spray gun in his hands. He kept toying with it.

"What *is* this thing?" he asked himself with a trace of exasperation. "Looks like a kind of spray gun."

Suddenly he indicated the belt with it, and demanded:

"Edgecombe, where did you get this?"

Russ did not answer.

Carpel turned to Zimmer. "You brought the records?"

"Yes, sir." Zimmer handed him two papers. "Three belts went out on the assignment," he informed him. "The men left at seven-thirty this morning. One has returned with a prisoner. Neither the wearer of that belt"—he pointed to Russ' belt on the desk—"nor of the third has since reported."

"That's too bad," Carpel said quietly, studying the papers, and there was something in his tone that made Russ' flesh creep. After a moment he laid them down, raised his eyebrows, and said to Zimmer:

"Well, I guess we must assume that the third belt has passed out of our control."

Respectfully Zimmer ventured: "We can't take chances, sir."

"No, we can't take chances." Carpel lifted a black leather book from a drawer in his desk, took it with the papers to a large cabinet along one wall, and opened the cabinet with a key from his pocket. Inside Russ saw a large panel with two dominating central dials.

Carpel pulled down a toggle switch, carefully turned the two dials to positions according to data he read from the papers and book, and made brief contact with a little knife switch in one corner of the panel. From within the cabinet sounded a burst of ear-jarring discord, such as would be made by a number of inharmoniously vibrating tuning forks. At once he re-threw the toggle switch, locked the cabinet, and turned back to his desk.

What could be the meaning of this?—wondered Russ. He had the feeling he had witnessed something significant; but the pieces would not make a pattern.

Carpel had hardly seated himself and laid a hand on the spray gun when he quickly rose again, raising the other in a stiff salute. Russ turned. Stuchen had come in! He recognized him at once—a tall, fattish man with slouching carriage, untidy uniform, and wild black eyes, incongruous above the folds of his rough, flabby cheeks and jowls. There was something repellant but at the same time fascinating about him, and for some reason Russ' heart beat fast.

"Who is he?" Stuchen asked directly in a harsh voice, jabbing his thumb toward Russ.

"Young Edgecombe, son of the secretary," Carpel answered. "We've just caught him in the building wearing his belt. He won't talk—yet."

Without taking his eyes off Russ, Stuchen handed Carpel several papers. He said:

"These messages have just come in from four widely separated regional headquarters. Apparently the revolt is country-wide in scope. Our own screen is already on; the building's under attack."

As Carpel skimmed over the messages an ugly look came to his face.

"Shall I give the necessary orders?" he asked.

"Yes."

"Carpel turned to Zimmer.

"Zimmer, get every invisible in the country out on the streets," he ordered, articulating each syllable clearly and showing anger but no slightest sign of alarm. "Order them to get every sniper, and to kill all people gathering in crowds. Let those dealing with the men on that list finish their assignment, then turn them out, too. We'll break this revolt before anyone knows it's begun."

Russ' heart sank. Carpel, and Stuchen, too, showed complete confidence. There was only anger and contempt.

Zimmer pointed to Russ.

"And this man, sir—what shall I do with him?"

Stuchen himself answered.

"Take him away and get to work on him," he ordered harshly. "I want particularly to know where his father is."

Zimmer saluted and started Russ toward the door. Before they had taken three steps, however, Carpel was speaking and they stopped and turned. Then, for the first time,

Russ saw the real man beneath his deceptive and somewhat ridiculous exterior.

"Every man, every woman, every child who takes part—dies!" he shrilled, his sharp voice cracking with the force he put into the words.

As he spoke he pointed the spray gun at Russ, and, as if that young man were the symbol of all the thousands who had to die, pulled the trigger.

Out squinted a haze of liquid—and as Russ, astounded, held his breath, Carpel, Stuchen, Zimmer fell to the floor—out by Carpel's own act!

IX.

RUSS RAN and took the spray gun from Carpel's limp hand, gave each of the three unconscious men a second, very heavy dose of the spray right in the nostril, then hurried over to the inlet of the ventilating system, stuck his head in the incoming stream of pure air, and renewed his breath. A moment later he was at the door, opening it not more than an inch and peeping through. Cathey was still there, along with a dozen other people, half of them guards.

"Cathey!" he called, lips close to the crack.

The young woman—and everyone else—looked toward the door with surprise. Speaking clearly each word and letter Russ went on:

"Our old transportation cipher. D L O H H T A E R B. Get it?"

Cathey started, then suddenly nodded. Russ stuck his spray gun in the crack and squeezed it half a dozen times. One by one, quickly, every person but Cathey slumped back in his chair or fell to the floor.

Without loss of a second Russ ran in to the outer door and locked it, then motioning Cathey he hurried back with her to the conditioned air inlet of the other room. She goggled at sight of the three men now

snoring stertorously there, and as they recovered their breath, Russ answered briefly her excited questions.

She was overjoyed. She told him how she had been picked up by Black Guards whom she found waiting in her apartment. Apparently, as one close to the center of the plot, she had been brought there for questioning.

Russ could not resist the opportunity. Nose to nose, he said:

"What a girl! Gets out cipher even when I talk it! I'm going to marry you if we ever get out of this mess."

Nose to nose she answered spiritedly:

"I shall never marry a man younger than myself!"

The trouble was, she never could say it and keep a straight face.

One of Carpel's visiphones buzzed, and almost at the same time there was a knock on the outer door. This sobered Russ instantly. Carpel, with Stuchen and Zimmer, had been taken out of the play, but people would keep coming to see him, making their position highly precarious. And there were those leaders, all over the country, being stalked with terrific speed at that very moment by his invisible killers.

Memory kept turning his mind to Carpel's strange act at the cabinet. His words came back: "I guess we must assume that the third belt has passed out of our control;" and those others both had spoken: "We can't take any chances." He ran and brought back Carpel's black book.

All it contained were two sequences of numbers. In a vertical list down the left side of each page was one sequence which began at 1,001 and ended with 7,000; and opposite, on the right side, another which began at 101 and ended with 6,100. Apparently the numbers across from each other were related. But how? Here were more pieces, but they still didn't fit. He wanted a look at the apparatus in the cabinet.

A second phone began to buzz, and the knock on the corridor door grew louder. Very cautiously Russ tested the air. It was clear! He told Cathey and ran and took the cabinet key from Carpel's pocket and opened the door.

At the top of the panel was a hinge, and he looked inside at what appeared to be a radio transmitter with an accessory group of seven tuning forks. Wires from the apparatus led down through the floor. The unit of frequency of the set was meters; the left-hand dial was calibrated in hundreds, the right in singles. Strange. More pieces, but still no pattern. But he was more sure than ever that here lay hidden something vital for him to know. He damned the visiphones and knocking, which were sounding, now, incessantly. Soon men would be breaking in to see what was the matter.

CATHEY'S FACE showed her worry. To clear his mind he told her what Carpel had done—and remembered then that he had carried two papers with him to the cabinet. Breaking off sharply he ran and caught them up. They were forms, each filled out with personal data on a man. At once his eye was caught by typed number in the corners—the numbers of the belts which had been assigned to the men. They were of a magnitude coming within the range of the left-hand list in the book! He examined his belt. Sure enough, under the buckle was the number which

appeared on one of the papers. Tingling with excitement now, suspecting the truth, he caught up the book and compared the frequency shown by the dials—which remained where Carpel had left them—with the smaller number opposite the belt number on the other paper. They were identical! Russ pumped his arms in his excitement.

"I've got it!" he exulted. "There are six thousand belts, and each one has a number, and the book lists them in sequence in this left-hand column," he explained. "Each belt also is assigned a radio wave frequency, differing from that of the previous and following belt numbers by one meter; these are on the right. Carpel assumed that a certain belt had passed out of their control—as he put it—because its wearer was overdue from reporting back from an assignment. Now they could expect that a belt would eventually fall into our hands, and as this would be highly dangerous to them they made provision for it. You begin to see? In each belt is a tiny radio receiver sensitive to one wave length—the one opposite its number in Carpel's book. And also in each belt is a deranging mechanism which will be actuated when the cabinet transmitter sends out over that wave length the sound made by the tuning forks. It's a way to derange any belt at a distance! It prevents the belt's being used against themselves! What else? Remember, both Carpel and Zimmer said: 'We can't take any chances!' "

"Oh, you've got it!" cried Cathey.

Russ took the book to the cabinet and switched on the current, making sure the tubes lit up.

"See," he said, more to himself than Cathey, "the lowest belt number is 1,001, and opposite this is the lowest frequency number, 101 meters. Setting the dials for 101 meters, then switching on the tone, will therefore send the tone to belt No. 1,001, wherever it may be, and actuate its deranger."

He had been setting the dials, and now he threw in the little tone switch, bringing on the ear-jarring discord.

"That takes care of that belt," he said. "Now, leaving the tuning forks sounding, and turning the units dial slowly through its complete circle, and repeating this with the hundreds dial one segment advanced, and so on—this should give every belt in the country, in turn, the tone trigger. For without doubt the book contains the complete list. The trigger probably works instantly, for the only factors involved are the radio wave, which has the speed of light, and the electric current in a few short wires, which approaches that speed. Unless," he corrected, frowning, "there is an electromagnet in the belt's circuit. Then the deranger might not be actuated faster than a twentieth of a second or so. I'll have to turn slowly."

CATHEY was glowing. The phones still buzzed without ceasing, and the knocking on the door was more imperative than ever. Russ snatched up his belt, read its number, and made a deep fingernail mark on the frequency opposite it in Carpel's book. Then he put the belt on.

"I'm going down the list in quick time," he announced. "Don't be scared when I throw this switch; I'll be more or less invisible, but I'll be all right. I'll skip my own belt's frequency when I come to it."

He touched the switch and stepped to the cabinet. To Cathey's eyes he arrived there without transition, a frightening object whose various parts were jerky and blurry in proportion as those parts were moved. Leaving the tuning forks sounding he set both dials at zero, then turned the units dial very slowly through its complete circle. If his analysis was correct, he had already deranged one hundred belts!

As he turned something disturbing had occurred to him. The audible tone would not actuate a deranger both when the belt was switched on and when it was switched off, for the time differential would make a tremendous difference in the pitch and volume of the set's sound output; one speaker wouldn't even handle the range. His theory called for another tone, a supersonic one, in parallel with the audible one. He looked again under the lid of the apparatus. Yes, there it was, without any doubt! He was sure he could see a row of crystals! And there had been a faint squeal, too, as he turned!

In his ears was another noise now, one unusually loud, and closing the lid he saw a strange expression appearing on Cathey's face. Alarmed, he touched his belt lever. He came back to normal midpoint in the sound of a terrific explosion! For a

second he thought his eardrums had burst, so sudden was its numbing onslaught. Pictures fell; the whole room was shuddering. The source seemed to be somewhere below. As the sound faded off and the shuddering lessened he had a peculiar, ominous sensation which he could not have described. Cathey's face showed the shock that must also be on his own. What had happened? Had he unwittingly caused it?

The peculiar sensation grew stronger. It now seemed as if the floor were moving, slowly moving to one side. The two looked at each other, then suddenly of one accord dashed for the window and looked down. But there was nothing to see there. A terrace many floors below cut off sight of the lower part of the building.

"Look!" Cathey cried suddenly.

In the distance the towering skyline of Jersey City lay a-tilt! A-tilt —and the angle was growing! Slowly, very slowly, their astounded eyes saw Ellis Island, Statue of Liberty, and skyline on their right dip down, while Staten Island and the intervening water traffic and skyline on the left rose in proportion. A terrific scare shot through Russ. There was only one explanation. The Citadel was falling! Already it was twenty degrees off the vertical!

Russ cried out the fact, but Cathey already understood. They had but a handful of seconds left. Those which had passed were the ones of slow fall; those left would see the strengthening pull of gravity drag them faster and ever faster to inevitable death beneath the waiting waters of the Bay.

Cathey sobbed. To die like trapped rats, just as they had learned how to strip from the invisibles their deadly power! Twenty little minutes more and the job would have been finished!

REMEMBERING, Russ darted his hand to his belt. The tilting stopped —almost. He cursed. Seconds had been lost while he was recovering his wits. Now, for himself, he had delayed the termination of the terrible fall; but Cathey—he had deserted her, leaving her alone to meet a death only a few breaths away.

A belt for Cathey! He darted into the reception room, but there was no unconscious invisible there. Surely Carpel would have a belt somewhere for his own use. Russ searched—and found one in a corner closet! Cathey was still a tragic statue, reacting to his disappearance, when he buckled it about her waist. He pushed the switch over and said rapidly:

"The nausea will pass at once. Don't be afraid—you're now in Carpel's own belt, at the higher time rate." He flashed a faint smile. "Our precious seconds have been multiplied by two hundred."

As Cathey readjusted her thinking Russ darted to the cabinet and lifted the transmitter's lid. The tubes were still lit, as he expected; even if the power line had been severed the radio room batteries would have automatically switched on. There probably would be current till water poured in through the windows. He would stay till the end, then, deranging belts.

But how much time did he have? Russ thought furiously. But it was hopeless to try and calculate it; complex, with factors of unknown values; and then they were already part way down.

"How long, normal time, will it take this room to reach the water?" he shot at Cathey. "Guess."

"Well, perhaps six seconds," she answered carefully.

"I would say eight. If we take six, that's twelve hundred seconds, fast time. Now, to derange all the belts I'll have to turn the units dial fifty-nine—say sixty times. That gives me twenty seconds per turn, or about a fifth of a second per belt. There are factors which will eat into that fifth—but Cathey, I'm sure it's enough, even if there's an electromagnet in the belt circuit! I can get everyone!"

"Then what are we waiting for?" Cathey asked with a slight smile. Russ asked:

"Is your wrist watch on quick time?"

She looked. "Yes."

"Good. Give it to me." As he fastened it to his own wrist he ordered, "Now give me the number of your belt." She looked, and told him; then, as with his own, he marked the frequency opposite it in Carpel's book, so as to skip it when he came to it. This done he turned and faced Cathey squarely.

"Now you scram," he ordered. "Get free of the building. You've got a fighting chance with the confusion below and the help of that belt. I'll see you later. I'll get out somehow at the last second. Now go. Take that projector, and don't hesitate to use it. This is an order."

Cathey smiled. "How domineering!" she said, and without another word left the room.

This hurt. He had had to be emphatic, but—she might have wished him luck. At least that. Didn't she realize that he had lied about his chance of getting away? He turned to the cabinet—

TWENTY TIMES he set the hundreds dial to the next segment; twenty times he slowly turned the units dial through its full circle, timing the turn by the watch on his

wrist. Forty more times, then, to turn it; eight hundred seconds; thirteen minutes to live, and living turn that dial, so that millions might live and breathe the breath of freedom when his task was done. It was hard! He could not hurry! For there might be a time-requiring electromagnet in those belt circuits! Slowly, evenly, timed to the second, he turned the dials, watching each passing white line cut its pitiful fraction from his life.

The floor rose more and more behind him; the cabinet angled farther and farther away; he had to reach. The top of the cabinet fell against the wall. He looked under the lid; the tubes were still lit. If they went out—if they did—then he could leave. But they did not go out, and he kept turning, turning. A chair slid down the room and hit the wall on one side. Then came another, followed by a small table. The desk would be dangerous! He snatched a look. It was being blocked by the body of Stuchen. He left the transmitter, climbed up and pulled the body to one side, and steered the big desk till it crashed into a corner. When he went back he stood with one foot on the floor and the other on the wall.

Twenty more turns to make; four hundred seconds; six and one half minutes to go—and the floor was steep behind him. Carpel's chair slid down and crashed into the wall; then, out of the corner of his eye, he saw a body, irregularly rolling, fetch up against its legs. He turned his hand. Horrible sight—the other two still-living bodies were coming down, fitfully sliding a little and stopping, rolling a little and stopping. But frightening was the view through the side window. The Jersey skyline was at an angle of seventy degrees!

Ten turns more—and he was praying that Cathey had got safely away. There had been time. Her greatest obstacle would be their own attacking ray just off the ground. They may have turned it off on seeing the building topple. The Citadel's screen certainly had gone off, or he would have felt it as the room arced through in its descent. Perhaps its source of power, the U-235, had exploded. Even probably. Nothing else could possibly account for an explosion of such magnitude as to topple the building. Something must have acted to inhibit its chain reaction and cause it to give up a large part of its energy at once.

Five turns more—then two—and there was Cathey at his side! Conflicting emotions tore at his heart. She was bruised but smiling, and looped over one arm was a length of heavy wire.

Russ finished his job, then turned.

"I thought we might need this," Cathey explained, indicating the wire and still smiling. "You took my estimate of six seconds, but yours gave us two more—and you're generally right."

"Cathey, Cathey!" was all Russ could say. There was a bit of time for themselves! And they needed that wire, for they were now standing on the lower wall, well below any window or door.

But Cathey had done even more. He saw now that her wire led up through the nearest window, fifteen feet overhead. "It's anchored in the radio room, on the floor below," she said. "That's how I came back in."

Again, "Cathey!" was all Russ could say.

He pulled two large drawers out of Carpel's desk, dumped and left them on the wall, then was on the wire, climbing hand over hand. He

just barely made the window before his hands and strength gave out; but at once he had Cathey throw the drawers up to him, then pulled Cathey up herself, the end of the wire looped to form a seat.

They stooped arm in arm on the window jamb and looked out. How peaceful lay the harbor under the warm noon sun!

Below, the under side of the Citadel was gently entering the Bay. A little away, the surface of the water was a sparkling patch of diamonds. Russ and Cathey each picked up a drawer and jumped far out for this patch.

FIFTY YARDS away they stopped swimming for the first time and looked back. The lower part of the Citadel lay high on the edge of the island, close to the tangled base from which it had been torn; the top floors were just disappearing under a long comb of spray-topped water which rose yet a little higher as they watched, then softly began to fall. Stuchen, Carpel, lay already in their grave.

Cathey—the old teasing Cathey—spoke.

"I think you're wonderful, Russ, figuring out about those derangers," she said.

"Pure analysis. Very simple for me," he answered, sparring back.

"Analysis, but not quite pure," she

came back. "You made a big mistake. I saw."

In spite of her tone a scare shot through Russ. She smiled at his expression and went on:

"You underestimated Stuchen's thoroughness. For you didn't just derange the belts, you exploded them! And the men in them, too! The radio room was rather messy."

In Russ' mind flashed a picture of an invisible hit by that U-235—

"What—no answer, analyst?" Cathey mocked. But Russ had an answer. He said:

"At a conservative estimate it took me, at the high time rate, five minutes to go from the hotel to Handley's, fifteen to get to the Battery, ten to get to the island, and a hundred and twenty to dry off. That's a hundred and fifty minutes, isn't it?"

"That's right," Cathey answered, wondering.

"Now one hundred and fifty minutes equals nine thousand seconds, doesn't it?"

"Yes."

"And those nine thousand seconds, divided by my time differential of two hundred to one, equals forty-five seconds of normal time—isn't that right?"

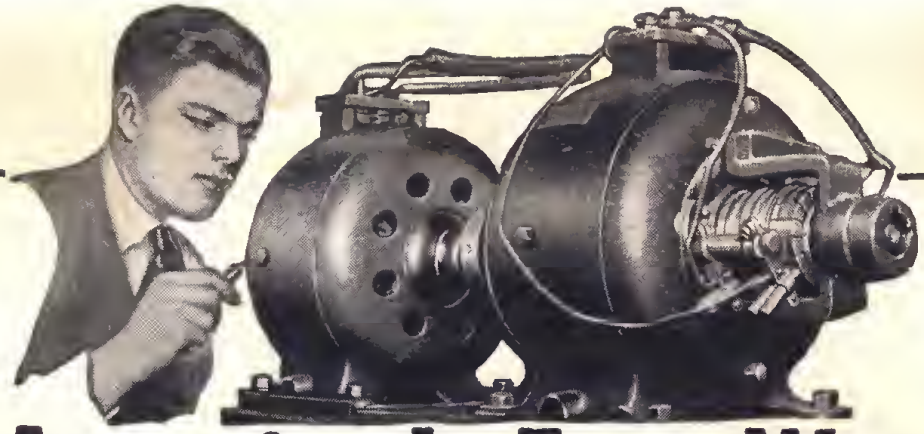
"I guess so," Cathey answered, seeing what was coming.

"Now you were born sixty minutes before me; but today, while I was living one hundred and fifty minutes at the high rate, you were living less than one at the normal rate. That makes me ninety minutes, less forty-five seconds, older than you. Doesn't it?"

"It's pure casuistry!" Cathey exclaimed, "and I ought to duck you! But I give up. I'll marry you."

"Pure analysis," Russ said. "Easy for me."

THE END.



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